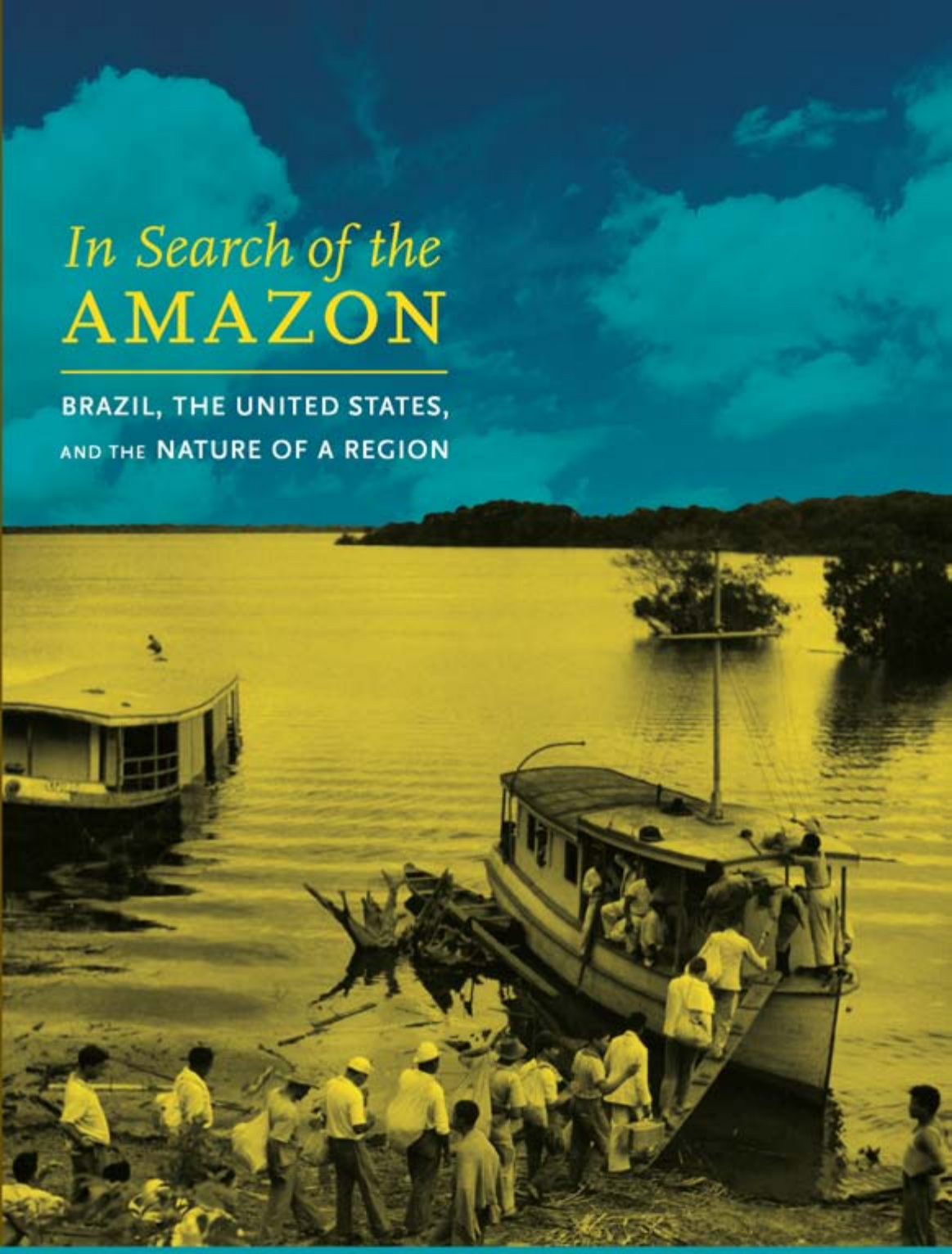
In Search of the AMAZON

BRAZIL, THE UNITED STATES, AND THE NATURE OF A REGION



SETH GARFIELD

VISIT…

IN SEARCH OF THE AMAZON

AMERICAN ENCOUNTERS/GLOBAL INTERACTIONS

A series edited by Gilbert M. Joseph and Emily S. Rosenberg

This series aims to stimulate critical perspectives and fresh interpretive frameworks for scholarship on the history of the imposing global presence of the United States. Its primary concerns include the deployment and contestation of power, the construction and deconstruction of cultural and political borders, the fluid meanings of intercultural encounters, and the complex interplay between the global and the local. *American Encounters* seeks to strengthen dialogue and collaboration between historians of U.S. international relations and area studies specialists.

The series encourages scholarship based on multiarchival historical research. At the same time, it supports a recognition of the representational character of all stories about the past and promotes critical inquiry into issues of subjectivity and narrative. In the process, *American Encounters* strives to understand the context in which meanings related to nations, cultures, and political economy are continually produced, challenged, and reshaped.

IN SEARCH OF THE AMAZON

BRAZIL, THE UNITED STATES, AND THE NATURE OF A REGION

SETH GARFIELD

Duke University Press Durham and London 2013

© 2013 Duke University Press
All rights reserved
Printed in the United States of America on acid-free paper ♾
Designed by Heather Hensley
Typeset in Scala by Tseng Information Systems, Inc.

Library of Congress Cataloging-in-Publication Data
Garfield, Seth.
In search of the Amazon : Brazil, the United States, and the nature of a region / Seth Garfield.
pages cm—(American encounters/global interactions)
Includes bibliographical references and index.
ISBN 978-0-8223-5571-7 (cloth : alk. paper)
ISBN 978-0-8223-5585-4 (pbk. : alk. paper)
1. World War, 1939–1945—Economic aspects—Amazon River Region. 2. Rubber industry and trade—Amazon River Region—History—20th century. 3. Brazil—Foreign economic relations—United States. 4. United States—Foreign economic relations—Brazil. I. Title. II. Series: American encounters/global interactions.
HC188.A4S5G37 2014
338.4'7678209811090 44—dc23
2013025464

TO NICA AND CALA

CONTENTS

ix Acronyms

xi Acknowledgments

1 **Introduction** The Reappearing Amazon

9 **Chapter 1** Border and Progress: The Amazon and the Estado Novo

49 **Chapter 2** "The Quicksands of Untrustworthy Supply": U.S. Rubber Dependency and the Lure of the Amazon

86 **Chapter 3** Rubber's "Soldiers": Reinventing the Amazonian Worker

127 **Chapter 4** The Environment of Northeastern Migration to the Amazon: Landscapes, Labor, and Love

170 **Chapter 5** War in the Amazon: Struggles over Resources and Images

213 **Epilogue** From Wartime Soldiers to Green Guerrillas

229 Notes

303 Bibliography

333 Index

ACRONYMS

ACA	Associação Comercial do Amazonas (Trade Association of Amazonas)
BASA	Banco da Amazônia (Bank of Amazonia)
BCB	Banco de Crédito da Borracha (Rubber Credit Bank)
BEW	Board of Economic Warfare
CAETA	Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia (Administrative Commission for the Forwarding of Workers to Amazonia)
CNG	Conselho Nacional de Geografia (National Geography Council)
CNS	Conselho Nacional de Seringueiros (National Council of Rubber Tappers)
DIP	Departamento de Imprensa e Propaganda (Department of Press and Propaganda)
DNI	Departamento Nacional de Imigração (National Department of Immigration)
FBC	Fundação Brasil Central (Central Brazil Foundation)
IAN	Instituto Agronômico do Norte (Northern Agronomic Institute)
IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
IFOCS	Inspetoria Federal de Obras Contra as Secas (Federal Inspectorate of Works to Combat Drought)
IPEN	Instituto de Patologia Experimental do Norte (Northern Institute of Experimental Pathology)

IRRC	International Rubber Regulation Committee
OIAA	Office of Inter-American Affairs
RDC	Rubber Development Corporation
RFC	Reconstruction Finance Corporation
RRC	Rubber Reserve Company
SAVA	Superintendência de Abastecimento do Vale Amazônico (Superintendency of Supplies for the Amazon)
SEMTA	Serviço Especial de Mobilização de Trabalhadores para a Amazônia (Special Service for the Mobilization of Workers for the Amazon)
SESP	Serviço Especial de Saúde Pública (Special Public Health Service)
SNAPP	Serviço de Navegação na Amazônia e Administração do Porto do Pará (Amazon Navigation and Port Authority Service)
SPVEA	Superintendência do Plano de Valorização Econômica da Amazônia (Superintendency for the Amazon Economic Valorization Plan)
SUDAM	Superintendência do Desenvolvimento da Amazônia (Superintendency for the Development of Amazonia)

ACKNOWLEDGMENTS

The research for and publication of this book would not have been possible without generous institutional funding. For assistance in conducting archival fieldwork and completing the manuscript, I wish to thank the National Endowment for the Humanities, the Andrew W. Mellon Foundation Faculty Fellowship in Latin American Studies, the Franklin and Eleanor Roosevelt Institute, the Rockefeller Archive Center, and the American Historical Association. At the University of Texas at Austin, I received fellowships from the Institute for Historical Studies, the Faculty Research Assignment, the Summer Research Assignment, and the Department of History's Scholarly Activities Grant.

In undertaking a research project that spans multiple regions in two countries, I have accrued debts of gratitude to individuals in far-flung places. Their knowledge, generosity, and patience enabled me to gain access to archival material, exchange ideas, and find my way in new surroundings. For assistance in conducting research in Fortaleza, I wish to thank Frederico Castro de Neves, Glaubia Cristiane Arruda Silva, Pedro Eymar Barbosa Costa, and Martha Santos. In Manaus, Luis Balkar Sá Peixoto Pinheiro allowed me to consult the J. G. Araújo collection at the Museu Amazônico; Hilma Reis Kouyoumiji patiently tended to me at the library of the Associação Comerical do Amazonas; and Marcio Souza took a deep interest in my work and placed me in contact with researchers at the Universidade Federal do Amazonas. In Belém, Geraldo Mártires Coelho offered a warm welcome, while

Marianne and Roberto Eliasquevici graciously opened their doors to me. In Porto Velho, Nilza Menezes and her staff deserve particular kudos for organizing and administering the computerized database of legal cases at the Centro de Documentação Histórica do Tribunal de Justiça de Rondônia. I would also like to express my gratitude to historian Valdir Aparecido de Souza, who guided me while I was in Porto Velho. In Rio Branco, I was fortunate to count on the collegiality of historian Francisco Pereira Costa. At the Museu da Borracha, Suziane Alves de Farias facilitated access to visual images and the reproduction of photographic material. At the Arquivo Nacional in Rio de Janeiro, Sátiro Ferreira Nunes and Kátia Borges provided very useful assistance. And for my stay in Princeton, I wish to thank my aunt, Lilian Minzer, for her hospitality and the challenging games of Scrabble.

Over the years, various colleagues and friends have provided letters of support, responded to academic queries, or offered professional guidance, and I wish to thank them for their generosity. They include George Reid Andrews, Cecilia Azevedo, Peter Beattie, Martin Berger, Leopoldo Bernucci, André Vieira de Campos, Matt Childs, Emilia Viotti da Costa, Ana Daou, Cynthia Gladstone, Regina Horta Duarte, Marshall Eakin, Priscila Faulhaber, Paulo Fontes, Alexandre Fortes, Jane Frank, Carlos Augusto Rocha Freire, John French, Greg Grandin, James Green, Francisco Foot Hardman, Susanna Hecht, Thomas Holloway, Gil Joseph, Mary Junqueira, Jeffrey Lesser, Antonio Carlos de Souza Lima, Isabel Lustosa, Frank McCann, John Monteiro, João José Reis, Stuart Schwartz, Gabriela Scotto, Louise Silberling, Mariza de Carvalho Soares, Barbara Sommer, Mauricio Tenorio, and Alan Tully. I offer special heartfelt thanks to Barbara Weinstein for her meticulous reading of my manuscript and her unstinting collegiality.

At the University of Texas at Austin, I have been fortunate to have wonderful colleagues. I particularly wish to acknowledge Jonathan Brown, Erika Bsumek, Virginia Burnett, Susan Deans-Smith, Neil Kamil, Denise Spellberg, and Ann Twinam. Geographer Gregory Knapp has also offered important feedback on my work. I thank as well Charles R. Hale, the director of the Lozano Long Institute for Latin American Studies, as well as former directors Bryan Roberts and Nicolas Shumway, for inviting me to serve as the Institute's undergraduate faculty adviser. The dedicated staff at the Benson Latin American Collection facilitates access to an extraordinary selection of materials on Brazil: a special commendation goes to Brazilianist Ann Hartness, former director of the library; David Block,

the associate director of the library and the Latin American studies bibliographer; and Jorge Salinas, library assistant. Finally, I would like to express my gratitude to a number of current and former graduate students in Latin American history and geography at the University of Texas for assisting me with my research: Felipe Cruz, Matthew Gildner, Christopher Heaney, Elizabeth O'Brien, Evan Ross, David Salisbury, and Edward Shore.

At Duke University Press, I am indebted to Valerie Millholland and Gisela Fosado for their dedication to my manuscript, and to Heather Hensley for the book design. I thank Gilbert Joseph and Emily Rosenberg for including my book in the American Encounters/Global Interactions series. I would also like to acknowledge the contributions of cartographer George Chakvetadze.

For their love and kindness, I thank my parents, Jack and Lyla Garfield. While I was growing up, they encouraged me to take paths less traveled, and I consider myself blessed to be their son. My in-laws, Rosa and Henrique Flanzer, have shown utmost *carinho* during my visits to Rio de Janeiro. I am grateful to my wife, Vivian Flanzer, for her love and support, and an integrity and resolve that continue to inspire me. I dedicate this book to my two daughters, Marina and Ana Clara, the lights of my life.

INTRODUCTION

THE REAPPEARING AMAZON

Luxuriant, sublime, forbidding, denuded: images of the Amazon arrest the beholder. Yet the Amazon enthralls us through more than its physical wonders. Its power is a social product, forged by people and institutions that have made material and symbolic investments in the region.[1] This book examines an array of mediators in Brazil and the United States that delineated the nature of the Amazon during the twentieth century. Focused on the era of the Second World War, this study explores how conflicts raging within and over the Brazilian Amazon came to shape landscapes and lifeways in the region. It offers an analysis of the political and environmental history of the Brazilian Amazon as much as a reflection on shifting cultural representations of its nature.

The Brazilian Amazon, which comprises between 70 and 80 percent of the total area of the Basin, has long been knotted in disputes over labor, resources, and meaning. As forester Roy Nash aptly stated in *The Conquest of Brazil* (1926): "Many things the tropical forest has meant to as many men. To the Indian, abundant home. To the convict turned adrift by the early Portuguese, abominable hell."[2] More broadly, we might argue, for peasant-extractivists and traders, the forest has presented the battleground or backdrop for struggles over sustenance and power. For outside promoters, proper use of the tropical forest promises to rescue societies from doom or disenchantment. For skeptics, the jungle defies remediation. Mirroring the broader Western oscillation between triumph and despair in imagining human capacity to trans-

form nature, such visions in the tropics invariably enlist hierarchies of race and nation.[3] The Amazon's vast geographic expanse, dense forests, and fitful integration into global markets have triggered and prolonged such conflicts and controversies.

During the twentieth century, the Amazon came to be summoned by a large number and range of contestants in the Northern and Southern Hemispheres.[4] The expansion of state power, population growth, and rising demand for raw materials redefined notions of economic need and national security. Industrialization fueled the expansion of cities and mass markets, while new technologies fired urban elites' faith in the capacity to vanquish space, distance, and time. Agricultural mechanization and land commodification displaced millions of rural smallholders. Policymakers and professional sectors identified or recast socioenvironmental problems in national or global terms, pitching solutions in the language of science and public planning. Mass media beamed news and images to far-flung consumers, and broader swaths of the population demanded the rights of citizenship. Amidst wrenching societal transformations, competing human designs on the Amazon proliferated.

As a hinterland, the Amazon challenged the competence of the Brazilian state to achieve governability and national integration. As a borderland, it crystallized geopolitical concerns with territorial defense. As a resource-rich land, the Amazon became increasingly entwined with patterns of capital investment in Brazil and trends in global consumption. As a promised land, it beckoned economic migrants, drought refugees, and adventurers. As a homeland, Amazonian landscapes comprised sites of concerted human intervention, founts of historical reference and environmental knowledge, and loci of conflicts over resources and power.[5] As a tropical lowland, the Amazon was marked as much by distinct ecosystems as invidious canards about race, place, and national character.

Indeed, the varied delimitations of the Brazilian Amazon, reflective of disparate biogeographic and political-administrative criteria, illustrate the multiple perspectives of institutional and disciplinary fields.[6] The hydrographic basin of the Brazilian Amazon encompasses the geographic region drained by the Amazon River and its tributaries. The Amazonian biome comprises a set of terrestrial and aquatic ecosystems that include tropical forests, floodplain forests, grasslands, savannas, mangroves, and palm forests. The "classic" Amazon is a geographic and political division comprising the six states of the northern region—Pará, Amazonas, Roraima, Rondônia, Acre, and Amapá—where tropical rain forest predomi-

Map Intro.1 Legal Amazon

nates. The "Legal Amazon," a federally created administrative unit dating to 1953, has extended the geographic boundaries of "classic" Amazonia by more than one-third through the incorporation of western Maranhão and the northern portions of Mato Grosso and Goiás (today the state of Tocantins)[7] (see map Intro.1).

This book approaches the field of political ecology in the Amazon as a study in conflicts over the use, rights, and definition of territory and resources among distinct social groups.[8] While recognizing the fundamental material basis to such struggles, the book also explores the symbolic and affective relationships that groups maintain with the biophysical environment.[9] Building on the concept of a "commodity ecumene," which anthropologist Arjun Appadurai defines as the "transcultural network of relationships linking producers, distributors, and consumers of a particular commodity or set of commodities," this study highlights how landscapes, politics, and things are constituted through such flows, processes, and interconnections.[10] Midway between the turn-of-the-century rubber boom and the contemporary environmental fracas, the wartime history of the Brazilian Amazon reveals the multiple mediations and networks that served to constitute the diverse region.

Of Jungle Explorers and Historians: Stories and Methods

Jungle explorers revel in recounting their arduous journeys, so I follow in their footsteps in enumerating the difficulties of writing a history of the Amazon. My tale is devoid of hair-raising brushes with piranhas, anacondas, stingrays, malarial mosquitoes, and treacherous rapids that comprise the standard fare of such accounts. Rather, as a historian, the greatest challenges that I encountered stemmed from social conditions in the Amazon, which pose particular problems for historical record-keeping and research, and consolidation of a historiographical canon.[11] In places where state power and capital falter, impunity flourishes, and humidity rules, archival material often ends up being poorly preserved and spotty (in both senses of the word).

Yet the Amazon has always fit uncomfortably into Brazilian historiography for epistemological reasons as well. Peripheral to the eastern slave-plantations that propelled colonial integration into Atlantic markets and to the import-substitution industrialization that fuelled economic growth in twentieth-century Brazil, the Amazon seemingly confounds the grand narratives of empire and the nation-state—the muses of History. Nor has the study of frontiers and borders coalesced as a specialized field in Brazilian historiography to situate the history of the Amazon in the process of nation-state formation.[12] In any event, the Amazon's long-standing integration into the global economy, the spatial fragmentation of its populations due to territorial size and dispersal of resources, and the variegated patchwork that characterize its social history complicate its conceptualization as "a frontier," if the latter is perceived as modernity erupting uniformly onto an uncharted hinterland.[13] In addition, the decades-long concentration of Brazil's doctoral programs in the nation's southern industrial core consolidated a formidable historiography covering the São Paulo-Rio de Janeiro axis, and drained academic talent from the north as well; and the prohibitive airfares from southern Brazil to the Amazon further dissuaded those unblessed with research grants from foreign universities, foundations, and governments.

Amid the so-called nature-culture divide grounding Western ontologies, the Amazon's academic banishment to the former realm has further deterred, or detoured, historiographical exploration.[14] It is not for nothing that the natural sciences and the social sciences—particularly geography and anthropology, with their disciplinary origins in the colonialist study of the "organic" rootedness and "primitive" mores of rural popula-

tions—have long claimed, and given rise to, the study of the Amazon.[15] Geographically distant from the centers of political power, economically "underdeveloped," and environmentally challenging to outsiders, the nature of the Amazon was declaimed a problem by scientific experts, policymakers, and international advocates, rather than a matter for historical inquiry.

Since historians, like jungle explorers, tend to overstate the originality of their discoveries, a number of qualifications are in order for the wary reader. Native sons of the Brazilian Amazon, notably Arthur Cezar Ferreira Reis, Leandro Tocantins, and Samuel Benchimol, were pioneering and prolific chroniclers of the region's rich history.[16] Moreover, Brazilian historiography's early emphasis on boom and bust cycles in national economic development spurred robust scholarship on the Amazon's legendary turn-of-the-century bonanza.[17] In a similar fashion, research on the region's boomlet during the Second World War has flourished over the last decade.[18] And our understanding of recent Amazonian history has been immeasurably enhanced by the groundbreaking work of geographers Bertha Becker and Susanna Hecht and sociologists Marianne Schmink and Charles Wood focusing on government policies, investment from the nation's core economic regions, and highway construction in the processes of regional formation and integration into the nation-state.[19]

Rather than an integrated analysis of the multiple networks and processes that mutually construct natures and societies, however, much of the existing scholarship on the Amazon has tended to depart from and isolate such poles. Environmental histories of Amazonian biota can obscure the role of labor, social conflict, and representation in the making of nature; or that nature is knowable through the mediation of the sciences, networks of instruments, and the intervention of professions and disciplines.[20] Social science texts examining the impact of public policies in the Amazon can conceal how the realms of discourse and the content of objects also serve to construct societies. And discourse-centered analyses can overlook that although rhetoric, representation, and semiotics impact things and social contexts, they are not worlds unto themselves.[21] Thus, whereas scholarship on the Amazon has tended to focus on modes of production and systems of land use, (geo)politics and public policies, or cultural representations, I intertwine these analytical strands to explore the multilevel processes of region making. My conceptualization of the Brazilian Amazon is informed by geographer David Harvey's in-

sight that places are constructed and experienced as material, ecological artifacts and intricate networks of social relations; are the focus of discursive activity, filled with symbolic and representational meanings; and are the distinctive product of institutionalized social and political-economic power.[22] I employ intersecting local, regional, national, and global scales to assess the multiple processes involved in the social production of space.[23]

Practitioners of environmental history, a field traditionally situated at the intersection of natural history and intellectual and cultural history, have examined the role of the environment in shaping human behavior, in shifting human relations with the nonhuman natural world, and in questions of sustainability. Others have explored the material and discursive production of nature, and the political processes that have shaped environmentalism.[24] My analysis of the Amazon's history heeds sociologist of science Bruno Latour's directive that nature and society should not serve as explanatory terms but rather as something that requires a conjoined explanation. Since "nature" cannot be separated from its social representations, and "society" itself has to be made out of nonhuman, nonsocial resources, Latour urges a historical-minded focus on the mediators and networks, composed of associations of humans and nonhumans, that create natures and societies.[25] In tracking the Amazon's intermediaries, I examine the region's laboring classes both as key instruments in the production of nature, through modification of its material base, and as shapers and subjects of public policies and debate.[26] But I also analyze other collectivities in Brazil and the United States—sanitarians and mosquitoes, doctors and pathogens, engineers and automobiles, journalists and newspapers, filmmakers and movies, botanists and rubber trees, chemists and synthetics, migrants and drought profiteers, ecologists and deforestation—that forged the Amazon during World War II and its aftermath. Thus, my lens shifts from the political and professional strongholds and media outlets in Washington and Rio de Janeiro to the boardrooms and laboratories of the large rubber goods manufacturers; from the highways of the United States to the parched backlands and war-wrecked economies of the Brazilian northeast; from the hardscrabble rubber properties, boom towns, and frontier health posts in the Amazon to the contemporary struggles of tappers and environmental organizations. The making of nature, as much as politics, emerges as a contested process that must be understood outside of conventional geographic and historiographical boundaries.

In exploring the "productive friction of global connections" that have framed the history of the Brazilian Amazon, this study ambles across continents rather than within them.[27] Although transnational analysis along a north-south axis may seem untoward given the physical dimensions of the Amazon Basin, which spills into eight different South American countries and one overseas territory, the decision stems from the particular story that I wish to tell: one that interlinks the histories of the United States—the place where I live, teach, and much of my readership resides—and Brazil, my country of study. Some may feel that my transnational take on the Amazon is redolent of colonialist literary production, marketed as it was for domestic consumption.[28] Or perhaps others will see a response to Eric Wolf's salutary injunction to uncover "the conjoint participation of Western and non-Western people in this worldwide process" of history—although I prefer less ideologically loaded, and inaccurate, labels to conceptualize the respective histories of the United States and Brazil.[29] My focus also reflects the challenge of conducting multiarchival, binational research in collections teeming with the documentation characteristic of twentieth-century bureaucracies. Ultimately, if all regions are made up of networks of social linkages and understandings that transcend bounded notions of place, any transnational method can only go so far or deep in narrating the historical past. Of greater importance is that a transnational optic need not jettison region- and nation-based analyses of the historical formations of race, space, class, culture, politics, or nature; nor need specialization in any historical subfield restrict practitioners to a singular methodology or research agenda.

Through a composite of synchronic snapshots, multisited in nature and often thick in descriptive content, this book focuses on an array of war-era mediators involved in the making of the Amazon, bearing in mind that "what are called environments, that is relations between people and nature, get made and remade not so much in the plans but in the process."[30] Chapter 1 examines the coterie of white-collar professionals, military officials, intellectuals, and traditional oligarchs in Brazil who endeavored to remake populations and landscapes in the Amazon during the first Vargas regime (1930–45). Chapter 2 traces the origins and objectives of U.S. government investment in the wartime Amazon, precipitated by the nation's loss of 92 percent of its rubber supply following the Japanese invasion of the Malayan peninsula in early 1942. Chapter 3 explores how Brazilian and U.S. policymakers sought to transform the local terms and meanings of forest labor, recasting the Amazon as an ar-

senal for hemispheric defense and a laboratory for social uplift. Chapter 4 analyzes the socioenvironmental factors that led tens of thousands to migrate from northeastern Brazil to the Amazon during the war. Chapter 5 assesses the varied wartime outcomes and historical legacies in and for the Amazon region. The epilogue, tacking from the 1970s through the United Nations Conference on Environment and Development of 1992, charts the Amazon's political reappearance as global ecological sanctuary, highlighting both historical links and counterpoints to the war era.

While introductions to contemporary accounts of the Amazon often begin by rattling off a list of superlatives that seemingly provide readers with definitive answers, this one closes with them to pose fundamental questions. At 2,700,000 square miles, the Amazon Basin is three-quarters the size of the continental United States, and a million square miles larger than all of Europe exclusive of Russia. Covering two-fifths of South America and three-fifths of Brazil, the Amazon Basin contains one-fifth of the planet's available fresh water, one-third of its evergreen broad-leaved forest resources, and one-tenth of its living species. The Amazon River, the longest in the world (at 4,255 miles) and the most voluminous, has some 1,100 tributaries, seven of which are over 1,000 miles long. And the Amazon's forests, with rainfall averages of 2,300 millimeters (7.5 feet) per year, represent, along with the adjacent Orinoco and Guyanas, over half the world's surviving tropical rain forests.[31] Shall we now ask: Who has brought such inventories to light? Why have the realities that they represent carried diverse social meanings? How has their significance evolved over time?

CHAPTER 1

BORDER AND PROGRESS

The Amazon and the Estado Novo

In 1941, U.S. historian Hubert Herring noted the Amazon's capacity to stir nationalist sentiment in Brazil. While residents of the more industrial states of São Paulo, Minas Gerais, and Rio Grande do Sul looked upon the rest of Brazil with condescension, he affirmed, they exhibited "indulgent imperial pride in the uncharted Amazon empire."[1] Three years later, geographer Earl Parker Hanson made a similar observation. Whereas elites once shunned discussion of the Amazon because it conjured images of a nation consisting largely of "vast jungled wildernesses, filled with poisonous insects and unpleasantly savage Indians," many had since decided that "there is the future South America."[2]

Such "pride" in the Amazon's "future" had been nurtured. Indeed, the nationalization of the Amazon "question" represents one of the dramatic transformations in twentieth-century Brazilian politics. Its origins can be traced to the first government of Getúlio Vargas (1930–45), and particularly to the authoritarian period of the Estado Novo (1937–45), when the rehabilitation of Amazonia morphed from a localized oligarchic longing into a state-backed crusade. While the economic nationalism of the Vargas regime has been extensively explored, this chapter examines the efforts of state officials and elites to promote the regional development of the Amazon.[3]

As economists have noted, in a country with one area that is rich and prosperous and another poor and stagnant, the periph-

eral region is only likely to attract public investment during periods of extraordinary prosperity, inflationary excess, or when the promotion of such growth assumes paramount national importance.[4] In 1937, the southern states of Rio de Janeiro, São Paulo, and Rio Grande do Sul accounted for more than half of Brazilian agricultural and industrial production; coffee comprised 70 percent of Brazil's exports, two-thirds of which came from São Paulo.[5] Moreover, residents of southern Brazil tended to view the Amazon as a Green Hell, or merely harbored general indifference to extraregional concerns in a continental nation.[6] This chapter analyzes the confluence of factors that redirected public policies and state investment toward the Amazon during the Estado Novo. Rising national and global demand for rubber offered new bidders for Amazonian latex. Geopolitical doctrines legitimized the military's quest to colonize the Amazon and tap its natural resources. And the Vargas dictatorship, disbanding the legislature, banning political opposition, and blaring official propaganda, upheld the development of the Amazon as a nationalist imperative. (Perhaps it is no coincidence that another full-blown, state-driven program to develop the Amazon would recur decades later in Brazil under military rule.)

Yet if nature, regions, and nations are produced from the power-laden struggles involving discrete human and nonhuman mediators, the task here too is to examine their protagonists during the Vargas era.[7] The Amazon's social meanings were delineated by forest biota, whose distribution, extraction, and circulation are discussed more fully in subsequent chapters. Among human mediators, the Amazon's new-found resonance during the Estado Novo reflected its embodiment of multiple aspirations in a society undergoing tumultuous change. Industrialists in southern Brazil favored access to cheap raw materials, tariffs, and subsidies, while Amazonian producers and traders clamored for higher prices for forest commodities.[8] Military officials strove to secure national borders and patriotic loyalties, while oligarchs defended local fiefdoms and prerogatives. Sanitarians groomed robust workers to sustain national development, while forest peasants resolved to use their bodies as they saw fit. Intellectuals searched for Brazil's organic roots, while technocrats heralded its future.[9] And poor forest dwellers repudiated the lifestyle overhauls and social stigmatization intrinsic to developmentalist projects.[10] Amidst such cacophony, however, standard refrains sounded. Policymakers and professionals trumpeted the potential of science, technology, and state planning to remake nature and society in the Amazon. And elite pronouncements compartmentalized the Amazonian region and the purported cultural lag

of its populations, even as the centralization of state power and the expansion of industrial capitalism deepened national integration.[11]

"Taking a Chance" on the Amazon

"Amazonia will be quite a game, but it will be worth it," Vargas's Foreign Minister Oswaldo Aranha reportedly stated. "What is needed is the audacity and imagination of new people accustomed to taking a chance, that is, to win and lose."[12] Indeed, the region's prospective developers confronted numerous challenges. Socioeconomic, environmental, demographic, and epidemiological factors in the Amazon hindered the flow of capital, the rule of law, the control of labor, the extension of social services, and popular identification with the nation-state. An area of roughly 1,845,500 square miles, the Brazilian Amazon comprised 54 percent of national territory in 1942. Yet its population of between one and a half and two million, an average density of one inhabitant per square kilometer, represented less than 5 percent of the national total.[13] Geopolitical thinkers admonished that the Amazon's sparse and dispersed population imperiled national security when colonial powers ogled tropical lands for raw materials and population resettlement, and neighboring countries schemed.[14] With scattered rural dwellers combing forests and rivers for tradable commodities and means of subsistence, Amazonian employers howled of a labor "shortage" that crimped exports and agricultural surpluses, stalled transport and public works, and inflated urban salaries.[15] And Brazilian statesmen bemoaned their inability to harness the Amazon's vast natural resources.

The Amazon's economic stability and long-term growth, moreover, seemed forever hostage to cycles of commodity booms and busts, seasonal harvesting of forest products, mobility of labor, and dependency on imports of food and consumer goods. As Agnello Bittencourt noted in his survey of the state of Amazonas (1925):

> The economic life of Amazonas is based on the extraction of forest products, chiefly rubber and Brazil nuts. The commercial and financial activity of the State is always dependent on the prices of these commodities, which are, for their part, at the mercy of speculative schemes and other unforeseeable circumstances.

When rubber prices dropped, workers abandoned the properties, commercial firms collapsed, and public finances contracted. But when they rebounded, "everything comes to life again: ships that had been docked

load up with merchandise and passengers; businesses hire new employees; imports increase as do customs receipts; and new buildings and other urban improvements crop up in Manaus, where life pulsates in the streets, the theaters, the schools, and the business firms."[16]

The region's stark socioeconomic and racial stratification further clouded the Vargas regime's vision of development with social justice. Observers spoke of two classes in the Amazon. An urban elite of largely Portuguese, Middle Eastern, and Sephardic Jewish descent possessed trade goods, ships, docks, warehouses, and processing mills; in the countryside, (absentee) landlords claimed the most accessible territories along the rivers in vast, uncultivated holdings that extended far beyond legal property lines.[17] The other class consisted of peasants, whose fight with the forest environment was "very direct and very severe." Tied by debt to landlords and merchants, they relied on subsistence and the extraction of scattered natural resources to acquire commercial goods under highly unfavorable terms of exchange. This class also included small farmers relegated to far-off, meandering channels (*igarapés*) and burdened by usurious terms of credit, punitive taxes, and lack of formal land title.[18] In the Amazon's urban centers, the underclass aggregated throngs of domestic servants, stevedores, washerwomen, prostitutes, vendors, beggars, and jacks-of-all-trades.[19] The poor were largely nonwhite, made up of *caboclos* of indigenous and mestizo origin, and northeastern migrants and their descendants; the 1940 census classified more than 50 percent of the Amazon's population as *pardo*, or "brown."[20]

Insalubrious conditions, deriving principally from poverty and lack of infrastructure, perpetuated a vicious cycle in the region.[21] Malaria, dysentery, typhoid, tuberculosis, yaws, leprosy, leishmaniasis, filariasis, venereal disease, and nutritional deficiencies afflicted residents, felled migrants, and repelled investors. Western medical care, best in Belém and Manaus—the capitals of Pará and Amazonas with respective populations of 250,000 and 90,000—eluded most locales; populations scattered over vast territories with slow forms of transportation relied on botanical medicines and an irregular supply of overpriced, and often adulterated, drugs.[22] In Amazon towns, the common practice of drinking from polluted rivers, due to the lack of running water and the challenge of building wells where the water table was too high, served to transmit intestinal parasites; shallow wells often became contaminated by latrines or provided breeding grounds for mosquitoes.[23]

While rivers served as the conduits for trade, settlement, and com-

Figure 1.1 Aerial view of Amazon region, c. 1943. *Source*: National Archives.

munication in the Amazon (see figure 1.1), seasonal variations in water levels and the presence of rapids on numerous waterways increased the hardships of transport and the cost of production and consumer goods.[24] On the main artery of the Amazon, ocean-going ships drawing twenty feet can reach the city of Manaus. But tributaries east of the Madeira river are interrupted by rapids within 200 miles of the main trunk; those to its west, such as the rubber-rich Purus and Juruá rivers, accommodate larger boats in upriver regions only during the rainy season from November-December to April-May.[25] Thus, a 2,395-mile trip from Manaus to Cruzeiro do Sul, near the Peruvian border, of thirty days in high river might take up to three months in the dry season, as upriver captains, consigned to flat-bottom boats, motor launches, and canoes, dodged sandbars.[26] Moreover, lack of scheduled transport, overcrowded vessels, fuel shortages, and frequent stops for firewood chronically delayed travel, while commercial shipping monopolies inflated costs and offered spotty provisions.[27] For the third-class passengers crammed in hammocks on the bottom decks of the larger steamboats, transport entailed sharing space with livestock, which in the absence of ice were carried alive and killed on board as needed, producing a "choice collection of smells."[28]

For nationalists, the "conquest" of the Amazon stood yet as a taunt to Brazilian character. In the Northern Hemisphere, environmental determinist theories condemned hot climates for ingraining indolence and inflaming passion over reason. Alternatively, detractors who attributed tropical "backwardness" to race, religion, or culture insisted that only "men from the Mississippi would make things hum along the Amazon and the Paraná"; or yearned that "when the great valleys of the Amazon and Congo are occupied by a white population more food will be produced than in all the rest of the inhabited world."[29] Small wonder, with national character on trial, that anthropologist Gilberto Freyre extolled the Brazilian military's initiatives to promote colonization of the hinterland as confirmation of "the capacity of *mestiço* populations (as is ours, in its majority) to accomplish in tropical lands superior achievements."[30]

The Vargas government's project for the Amazon entailed the rationalization of the rubber trade and the expansion of commercial agriculture, subsidized migration, improvements in sanitation, public health, and transportation, and militarization of the hinterland.[31] Upholding Enlightenment beliefs in the perfectibility of peoples and places through science, Brazil's expanding professional sectors and bureaucratic apparatus vowed that out of vast jungle would emerge orderly landscapes, market-oriented producers, and hearty patriots.[32] Through public discourse and political spectacle the regime stoked popular interest and national pride in the Amazon's potential.

Remaking Amazonia: A Centuries-Long State Ambition

Four centuries after Europeans first descended the Amazon river, Brazilian state officials still struggled to exert control over the basin's human and natural resources. In 1542, Francisco de Orellana, a conquistador of Peru searching for the fabled lands of El Dorado, had led the first band of Europeans down the great river, which they named "Amazonas" following a purported attack by indigenous female warriors reminiscent of classical legend.[33] Although Spain claimed the Amazon under the Treaty of Tordesillas of 1494, which divided New World dominions between the Iberian monarchies, over the next centuries the Portuguese moved to control the estuary of the river and to extend their dominion over the basin. Lisbon's success was facilitated by geographic advantage: the Portuguese gained access to the region through the Amazon River's mouth and Atlantic seaborne trade, whereas Spaniards had to confront the rugged Andean mountains and dense jungle before reaching navi-

gable rivers. Based on claims of prior occupation, achieved principally through the establishment of forts and missions, the Portuguese acquired formal rights to Amazonian territory from Spain under the Treaty of Madrid of 1750. The new colonial boundaries of the Iberian kingdoms in the Amazon—delineated according to patterns of European occupation, geographic features, and waterways—were established by the Treaty of San Ildefonso of 1777.[34]

During the colonial period, Amazonian populations and resources were linked to global trade through the export of *drogas do sertão*, an assortment of botanicals collected in the wild by indigenous peoples and prized by Europeans as condiments and curatives.[35] The most lucrative New World plantation crops, however, such as sugar, cotton, tobacco, cacao, and coffee, grew better in drier and more temperate climates, while Amazonia's poor soils, seasonal flooding, lush vegetation, and aggressive pathogens generally confounded Europeans. Chronic shortage of capital precluded large-scale importation of African slaves, leaving settlers overwhelmingly reliant on indigenous labor.[36]

John Hemming has estimated the population of lowland Amazonia at between four and five million in 1500—of whom three million were in present-day Brazil. Comprising over four hundred different peoples, aboriginal societies in the Amazon were marked by extensive settlements and fairly sedentary lifestyles. They cultivated manioc, a tuber high in carbohydrates, on the *terra firme*, where most of the land is of low fertility and deficient in animal life. They also relied on animal capture, fishing, and agriculture on the *várzea*, the alluvial forest that is annually renewed by rich silt from the Andes (and which comprises only roughly 2 percent of the entire Amazon basin). Cultivation on the várzea—although tricky due to the unpredictable flooding of crops, and compromised by the reduction in protein supplies during the high-water season when fish swim inland, birds fly north, and egg-laying turtles disappear—was practicable with large labor reserves.[37] But in 1743, when French scientist Charles-Marie de La Condamine sailed (unauthorized) down the Amazon, he found hundreds of miles of uninhabited stretches along its banks. Epidemics, warfare, and enslavement had decimated the indigenous populations during the intervening years.[38] Moreover, the introduction of European goods and the extraction of forest products for export upended traditional native subsistence patterns. Reorienting the Amazonian economy toward systematic commercialization of natural resources, European colonialism and Atlantic trade engendered new har-

vesting strategies, residential patterns, and forms of spatial distribution for native populations.[39]

Portuguese officials, like countless subsequent outsiders, dreamed of making better use of people and places in the Amazon.[40] The "Law of Liberties" of 1755, issued by Portuguese Secretary of State Sebastião José de Carvalho e Mello (better known as the Marquis of Pombal), abolished indigenous slavery and stripped missionaries of temporal power over native communities, which were placed under the tutelage of a (white) director. Seeking to forge a racially integrated and European-style peasantry in the Amazon, Pombal's reforms barred legal discrimination against Indians and peoples of mixed race and rewarded marital unions between Luso-Brazilian men and indigenous women in an attempt to promote long-term settlement.[41] Yet Pombal's efforts to overhaul the Amazon foundered. Under the Directorate (1758–98), indigenous peoples continued to be mobilized to collect *drogas do sertão*; to paddle canoes and transport cargoes; to work on the construction of forts, public works, and in shipyards; and to perform labor for settlers for derisory compensation or under outright duress.[42] Whereas an estimated thirty thousand Indians lived under direct colonial control in the Amazon at the start of the Directorate, forty years later the population had plummeted to nineteen thousand because of disease, overwork, and flight.[43]

Following Independence, economic and racial tensions in the Amazon Valley exploded in the Cabanagem revolt of 1835. Originating in Belém as an intra-elite dispute, the rebellion soon turned into a mass rural uprising marked by guerrilla warfare and horrific violence. A half decade of fighting claimed the lives of some thirty thousand people—one-fifth of the Brazilian Amazon's population at the time. And the ensuing geographic dispersal of populations dedicated to mixed subsistence and extractive activities further exacerbated the labor shortage in the province of Pará.[44] Official efforts to colonize the Amazon during the Brazilian Empire (1822–89)—including the creation of military colonies at São João do Araguaia (1850) and Óbidos (1854), as well as state-sponsored and privately administered settlements for northeastern migrants—largely failed.[45]

Between 1850 and 1910, the Amazon's domination of raw rubber production deepened regional integration into the global economy. Crude rubber is obtained from latex, a milky emulsion that occurs in the roots, stems, branches, and fruit of a wide variety of trees, vines, and plants; when treated properly, the tiny globules of the rubber hydrocarbon that float in the viscous liquid can be coagulated and solidified into crude

natural rubber.[46] The premiere source of crude rubber is *Hevea brasiliensis*, a tree native to the Amazon, particularly its southwestern zones, where millions dot vast expanses of the forest, although typically no more than three or four Hevea grow per acre.[47] Subsequent to Charles Goodyear's discovery of vulcanization in 1839, which mixed in sulfur and applied heat to ensure rubber's resistance to fluctuations in temperature, the material came to be widely used in manufacturing and construction.[48] Consumer demand skyrocketed with the introduction of the low-wheeled Rover safety cycle in England in 1885; John Dunlop's patenting of the pneumatic bicycle tire in 1888; and the proliferation of tens of thousands of bicycles worldwide over the ensuing decade.[49] In 1890, the Amazon commanded 90 percent of global production of rubber and remained the single largest producer over the next two decades, reaching a historic annual peak of 42,000 tons in 1912.[50] Indeed, during the first decade of the twentieth century, rubber climbed to second place in Brazil's overseas commodity trade, comprising 40 percent of the total value of national exports by 1910 (only 1 percent lower than coffee), and greatly increasing the influx of foreign exchange throughout the country.[51] Moreover, unlike the plantation economies of the circum-Caribbean, Brazilian nationals (or recent immigrants) controlled the means of production in the Amazon, although European and U.S. import-export houses dominated the international trade in raw rubber during the boom.[52]

Between 1870 and 1910, the population of the Brazilian Amazon quadrupled from 323,000 to 1,217,000. Rapid growth resulted primarily from the mass influx of migrants from northeastern Brazil seeking economic opportunity and refuge from catastrophic drought.[53] Manaus, whose population rose from 3,000 in 1867 to 50,000 in 1900, became one of the first cities in Brazil to have electric lighting and telephone service.[54] And Belém, founded in 1616 near the mouth of the Amazon, thrived as a commercial and administrative center: the capital of Pará had a population of over ninety thousand in 1900 (one of Brazil's largest cities at the time) and boasted electric lighting, trolleys, public works, and small-scale industry.[55]

The Amazon rubber boom was all the more remarkable given its primitive mode of production. Bosses advanced merchandise and credit to workers who tapped latex from scattered wild trees, and who exchanged cured rubber for goods, and less often for cash, under highly unfavorable terms. Moreover, most Hevea grew upriver some 2,000 to 2,500 miles from the Atlantic Ocean, far from commercial centers in Brazil and over-

seas consumption sites, and with trade hobbled by slow and irregular river transport.[56] Investors eschewed the creation of rubber plantations due to heavy capital outlay, the absence of properly surveyed or registered land, the challenge of regimenting labor, and the five-year lag between planting and production. Subsequent discovery of the South American leaf blight (*Dothidella ulei*), a fungus that ravaged rubber trees planted in close proximity in the Western Hemisphere, only gave additional pause.

The reign of Amazonian rubber proved fleeting. Commissioned by the Royal Botanic Gardens, Englishman Henry Wickham smuggled 70,000 seeds of *Hevea brasiliensis* from the lower Tapajós River to London in 1876.[57] Upon germination, the British transplanted the seedlings to Ceylon, Malaya, and other regions of Southeast Asia, where they were cultivated on plantations.[58] In 1910, wild rubber from the Americas and Africa collectively accounted for 90 percent of global production, and Asian plantations for 10 percent, but the proportion was thoroughly inverted over the next decade. Indeed, from a mere 65,000 acres in 1905, Asian rubber cultivation expanded to nearly eight million acres by 1930, and cost one-quarter the price of wild rubber. By 1932, Amazonia produced less than 1 percent of global rubber.[59]

Although Asian rubber production was spared the South American leaf blight fungus, its success owed also to heavy capital investment and state subsidies; extensive scientific research; accessibility of rubber trees on plantations and family farms with facility of transport; and cheap, regimented labor. (The Amazonian tapper's average yearly production of 1200 to 1500 kilograms of rubber represented slightly less than one quarter of the Asian worker's annual yield.) Plantation rubber also contained less than 2 percent of impurities and was exported in sheets, whereas Brazil's finest grade of rubber had 16 to 20 percent of impurities and arrived in the form of 30–40 kilogram balls, which required additional time and expenses for cutting, washing, and purging.[60]

As the price of wild rubber plummeted, boom towns in the Amazon became ghost towns. In Óbidos, Pará, for example, the population fell from thirty thousand inhabitants in 1907 to about three thousand in 1920.[61] And in 1929, a visitor to Lábrea, Amazonas, which had once prospered from the rubber trade on the Acre and upper Purus rivers, described a hamlet "in complete ruin, desolate, forlorn, and abandoned."[62] With the Amazon's economic decline, outsiders also came to depict the region as more formidable, or forgettable.[63] If in *The Land of To-morrow* (1906), J. Orton Kerbey, a former U.S. consul in Belém, hailed the Ama-

zon region as "the California of South America," twenty years later forester Roy Nash declaimed, "most of the Amazon forest enters no more into the life of our globe than would forests on the silvery satellite."[64]

Yet what appeared to most interwar observers as the Amazon's coda would prove mere interlude amidst the convulsive rhythms of the twentieth century. Between 1880 and 1914, sweeping technological innovations such as the radio, telephone, cinema, automobile, and assembly line created new ways to think about and experience time and space.[65] Neo-Malthusian theories warned that urban overcrowding and depletion of raw materials would trigger ecoscarcity and public calamity.[66] The United States and European powers staked out colonial possessions to secure access to natural resources and waterways, while the trauma of global trade disruptions during World War I haunted the postwar governments and militaries of the Great Powers.[67] In Brazil, political leaders, army officials, and industrialists contemplated the challenges of modernizing production, mining natural resources, and reaching far-flung populations, while the quest for sustenance or social mobility kept poor populations on the move.

The March to the West and the Presidential Visit to Manaus

On October 10, 1940, thousands lined the main thoroughfare of Manaus to welcome Getúlio Vargas, "the savior of Amazonia."[68] At the junction of the Amazon and Negro rivers, some one thousand miles from the Atlantic coast, Manaus served as the political and financial capital of the state of Amazonas (see figure 1.2). The city long bedazzled weary visitors with its electric-lit domiciles, tramcars and automobiles, public buildings and squares, and its Belle-Époque opera house adorned with Venetian glass chandeliers, marble pillars, and fine paintings.[69] "It seems almost incredible that after so many miles of water," wrote a traveler in 1928, "that the gallant and captivating sight of Manaus appears to us smiling and cheerful, as if a mysterious miracle, greeting us with kindness and hospitality."[70] But the city had suffered hard times for decades, while its poor population had swelled during the interwar years from 75,000 to 96,400, mainly due to emigration from the stricken *seringais* (rubber properties).[71] Many of the downtrodden undoubtedly waited on the boulevard that day to catch a glimpse of the president.

Manaus contained a number of small industrial establishments dedicated to food and beverages, manufacture of rubber goods, and processing of leather and animal skins. But the city remained in 1940 princi-

Figure 1.2 Image of Manaus, capital of the state of Amazonas, early 1940s. The Teatro Amazonas, the famed opera house inaugurated in 1896, is the domed building on the left. *Source*: National Archives.

pally a commercial entrepot for trade with the vast interior. Oceangoing vessels brought in manufactured goods and foodstuffs for Manaus and the hinterland, such as sugar, wheat flour, coffee, potatoes, beans, jerked beef, lard, and dairy products. On their return trips, the steamships sailed with forest products assembled in town from the launches, rafts, and small steamboats that collected the commodities on the upper tributaries of the Amazon River (see figure 1.3). In October 1940, rubber led the state of Amazonas's exports, dwarfing Brazil nuts, pirarucu fish, and lumber (see table 1.1). Tappers extracted the finest latex (*borracha fina*) along four principal rivers.

With Europe convulsed by war in September 1939, a global scramble for rubber seemed poised to swing the pendulum in favor of the Amazonian trade. Rumors buzzed at the headquarters of the Associação Comercial do Amazonas (Trade Association of Amazonas-ACA), which congregated representatives from the state's tight-knit mercantile class involved in the marketing of forest products and the forwarding of credit and merchandise to producers.[72] "Heretofore, when rubber arrived in Manaus, the buyers deliberated for some time before attempting to buy it," Ameri-

Figure 1.3 Rubber being loaded for export from Manaus. *Source*: National Archives.

can vice consul Hubert Maness would note. "Today this situation is quite different. Rubber is immediately sold upon arrival from the interior. The rise in price has given the buyers more confidence and enthusiasm."[73] Indeed, the visit of the president to Manaus in October 1940 hinted that perhaps this latest boom in the Amazon might be different after all.

In his oration in Manaus on October 10, 1940, officially dubbed the *Speech of the Amazon River*, Vargas outlined his government's intent to remake nature and society in the Amazon. "Conquering the land, dominating the water, and subjugating the forest have been our tasks" for centuries, Vargas noted. "What Nature offers is a magnificent gift that demands care and cultivation by the hand of man." Deeming vast, unpopulated space the greatest enemy to progress in the Amazon, he pledged state support for colonization, "rationalization" of production, and improved transport. "Nothing will deter us from this undertaking which is, in the twentieth century, the greatest task for civilized man: to conquer and dominate the valleys of the great equatorial torrents,

Table 1.1.
Rubber Production along Rivers of Amazonas and Acre in 1940

RIVERS IN STATE OF AMAZONAS	RUBBER IN KILOGRAMS IN OCTOBER 1940
Lower and Upper Juruá	222,181
Lower and Upper Purus	219,729
Madeira, Aripuanã	142,547
Solimões, Japurá, Jutaí, Javari	95,658
Littoral (Manaus)	12,128
Lower Amazonas	2,749
Negro	1,511
Branco	793
RIVERS IN TERRITORY OF ACRE	**PRODUCTION OF RUBBER IN KILOGRAMS IN OCTOBER 1940**
Purus and Acre	197,192
Juruá	22,199

Source: Revista da Associação Comercial do Amazonas 288 (December 1940): 5.

transforming its blind force and extraordinary fertility into disciplined energy."[74]

Since late 1937, the regime had promoted the March to the West, a state-directed development program for central Brazil and the Amazon underwritten by a host of newly minted government agencies. The Ministry of Agriculture's Department of Land and Colonization (Divisão de Terras e Colonização), created in 1938, oversaw the distribution of 20- to 50-hectare plots on public lands, and the extension of credit and technical assistance to smallholders.[75] The Instituto Agronômico do Norte (IAN), founded in Belém in 1939, conducted research on Amazonian flora and soils, crop diversification, and cultivation of high-yield, fungus-resistant rubber trees. The Serviço de Estudos de Grandes Endemias (SEGE), established in 1940, was entrusted with undertaking epidemiological surveys in the Amazon Valley to lay the groundwork for a broad public health campaign.

In addition, the state-controlled Serviço de Navegação e Administração dos Portos do Pará (SNAPP), a shipping line and dockyards, replaced the teetering, foreign-owned Amazon River Steam Navigation Company

Limited and Port of Pará in 1940.[76] The Vargas government had nationalized the North American–controlled Madeira-Mamoré Railroad, which linked Porto Velho to Guajará-Mirim on the Bolivian border, nearly a decade earlier. In 1940, Vargas also authorized the state-owned Lloyd Brasileiro shipping line to issue 4,000 tickets per year to families from northeastern Brazil (*nordestinos*) to work on the rubber properties of Amazonas and Acre. Resettlement fell under the administrative purview of the Departamento Nacional de Imigração (DNI).[77]

To what extent Vargas's Amazonian policies sealed a so-called oligarchic pact, or whether state formation is irreducible to class-based agendas, represent contentious historiographical issues.[78] Since assuming power, Vargas had courted elites in the northern states to offset political opposition from São Paulo during his provisional government (1930–34). Yet many junior military officers and progressive reformers who backed Vargas deplored Brazil's deep regional and economic disparities, championing social welfare policies.[79] While these political tensions will be analyzed over the course of this study, for now, we might explore why policymakers and professionals during the Estado Novo came to insist that the Amazon was ready for takeoff.

The Brazilian Amazon in a Shifting Historical Context

The Vargas regime's project to rehabilitate Amazonia resembled the blueprint of the Plano de Defesa da Borracha of 1912. The government of Hermes da Fonseca (1910–14), fumbling to forestall eclipse by the Asian rubber trade, had proposed revamping Amazonia's transportation system through river dredging and construction of narrow-gauge railways to bypass rapids; the creation of experimental stations for rubber and agricultural cultivation; the establishment of mobile dispensaries and quinine posts for the rural population; the reduction of export taxes for rubber-producing states; and subsidized immigration.[80] But with capital scarce in the Amazon, weak domestic demand for rubber, and the northern states' political marginality under the republican federalist system (1889–1930), the program foundered. The Brazilian Congress denied additional funding in 1914, and the ascendancy of Asian rubber on the international market dashed prospects for a quick rebound.[81]

On the eve of World War II, rubber still constituted only 1 percent of Brazil's total exports, but domestic demand had risen with the national increase in motor vehicles. In 1900, Brazil had imported merely four automobiles (along with their chauffeurs), but by 1939 there were

122,000 cars (and 202,800 motor vehicles). And although automobiles remained a status symbol for a privileged minority, they had begun to change the pace of life in Brazil's larger cities, and even smaller towns, through the widening or paving of streets, and new opportunities for commerce and leisure.[82] Over the decade of the 1930s, production in the automotive sector increased by nearly 50 percent, and road extension doubled from 75,689 to 160,590 miles—to the delight of army officials bristling at Brazil's dilapidated rail transportation network geared toward rural production.[83] Between 1938 and 1941, multinational tire companies such as Goodyear, Firestone, and Pirelli set up factories in São Paulo—which controlled 90.4 percent of the manufacture of heavy rubber goods in Brazil at the time—nearly doubling internal consumption of raw rubber.[84]

Amazonian rubber, however, failed to satisfy rising domestic use. Since the 1920s, Brazilian legislation had granted low interest loans and federal tax exemption to rubber goods manufacturers who used domestic latex, but Amazonian producers had little incentive to favor local industries over export markets. In 1938, more than 80 percent of Amazonia's sixteen million kilos of rubber was exported, prompting renewed calls from industrialists and army officials for government regulation of the trade, particularly after the outbreak of the European war in 1939.[85] In *Amazônia Econômica: Problema Brasileiro* (1941), José Amando Mendes cited rising demand for manufactured rubber goods in Brazil and the River Plate as challenges for "strong nations that desire self-sufficiency."[86] That same year, the Conselho Federal do Comércio Exterior (Federal Council of Foreign Trade) studied measures to improve transportation, credit, tax structure, and labor recruitment for the Amazon rubber trade.[87]

The Vargas regime also maneuvered to exploit the mounting rivalry between Germany and the United States over access to Brazilian markets and raw materials. While a 1935 treaty between the United States and Brazil had emphasized reciprocal trade, Germany offered the cash-strapped Vargas regime a barter system that allowed for the exchange of raw materials for industrial goods. Between 1935 and 1937, German exports to Brazil surpassed those from the United States; and while Brazilian exports to the United States over the next two years more than doubled those to Germany, the trade varied considerably by commodity. For example, in 1938, 77 percent of Brazil's total rubber exports went to the Reich, constituting 7.2 percent of Germany's total supply.[88]

With the outbreak of war in Europe, U.S. strategists pushed for the acquisition of Western Hemisphere raw materials to ensure American military and economic capability, to preclude purchase by the Axis, and to stabilize the export-dependent economies of Latin America. Brazil was particularly targeted because of its abundant resource endowment, including iron ore, quartz, chrome, manganese, nickel, bauxite, tungsten, oil seeds, fibers, and rubber. As journalist Mario Guedes presciently noted in 1940, Brazil could only stand to benefit from U.S. rubber dependency, the "Achilles Heel" of its industrial production.[89] Moreover, Brazil's political influence in South America and large population of German descent nudged Roosevelt's Good Neighbor Policy toward the use of foreign aid to cement hemisphere alliance against the Axis.[90] In a 1939 mission to Washington, foreign minister Oswaldo Aranha secured nearly $20 million in loans for Brazil to pay off arrears; credit from the Export-Import Bank to finance purchases in the United States; and promises of technical aid for the modernization and diversification of agriculture (including rubber) and mineral exploration. In return, the Brazilian government pledged to regulate the German compensation trade, relax foreign exchange controls, and expand raw rubber production.[91] The following year, plant scientists from the U.S. Department of Agriculture initiated collaborative research at the Instituto Agronômico do Norte to clone and cultivate blight-free Hevea trees.[92]

The Vargas regime also leveraged northern Brazil's newfound geopolitical importance for hemispheric defense. Long-distance aviation had placed Brazil's northeastern "bulge" only eight hours from West Africa, and although Germany had no plans to create an Axis bridgehead in the Western Hemisphere, U.S. military defense and foreign policy from late 1938 to December 1941 labored to prevent a potential invasion of South America. While Vargas rejected the U.S. proposal to station American troops in the northeast (leery of antagonizing the Axis and of long-term U.S. intentions), the regime did accept American air and naval support, hoping to modernize the nation's armed forces.[93] Under a secret contract, the United States Army commissioned Pan American Airways in 1940 with constructing two chains of airfields—a string of some fifty-five—leading from North America to northeastern Brazil. The so-called Airport Development Program cost over $90 million, more than half of which was spent on fields in northern and northeastern Brazil. Landing fields or seaplane facilities were built or enlarged in Amapá and Belém in the Amazon, and at São Luís, Camocim, Fortaleza, Natal, Maceió, and Recife

in the northeast, allowing for the transshipment of U.S. aircraft ferried between the Caribbean basin and the northeastern bulge.[94] More broadly, geopolitical rumblings of the 1930s and 1940s allowed Brazilian nationalists to dramatize the importance of defending Amazonian territory.[95]

Political centralization, industrial growth, and geopolitical rivalries deepened Brazilian state intervention in the hinterland prior to Pearl Harbor. Yet efforts to remake nature and society in the Amazon issued from discrete sets of mediators in Brazil. The heterogeneous group included Amazonian elites, junior military officers, intellectuals, plant scientists, doctors, industrialists, engineers, journalists, and geographers. Hailing from the bastions of the oligarchy to the newly created bureaucracies and professionalized sectors of the Vargas era, they upheld in varying degrees the dictates of their social class and professional guild, the agendas of civilian sectors shaping public policies, and the general interests of the state.[96] An analysis of their knowledge claims and policy directives reveals a repudiation of environmental determinism alongside condemnation of Amazonian landscapes and lifestyles.

Amazonian Elites: The "Authenticity" of Regional Knowledge

Although scholars have viewed the Amazon as a region invented by (geographic) outsiders, it is very much the product of insiders as well.[97] With minimal sway over Brazil's political economy, Amazonian elites strove to remake their region through, and due to, national integration.[98] Since the bust of the rubber trade, they had repackaged local to-dos as national travesties, demanding both federal assistance and deference to regional know-how. As Governor Lauro Sodré of Pará stated in 1917: "With our life having reached the point of near complete misery, only one medium would be truly opportune and practical at this time: the assistance of the Federal Government."[99] The perennial wish list included federal subsidies for rubber plantations, labor migration, agricultural colonies, education, and public health.[100]

Spotlighting the forest's value and vulnerability was standard fare for elites in the 1930s to court outside support. One pitch stressed the growing importance of rubber for Brazil's transportation sector and military defense.[101] Close behind were admonitions of potential foreign usurpation—foreshadowing the "Amazonia is ours" slogan popularized during the 1970s. As Aurélio Pinheiro lamented, an unfortified Amazon presented "a danger for our sovereignty, for our integrity, for the life of the nation, because sooner or later the covetousness of stronger nations will

extend its reach to this abandoned, isolated, defenseless region wedged between the borders of five nations."[102] In lobbying for federally subsidized colonization in the Amazon, Hanibal Porto, ACA's political liaison in Rio de Janeiro, likewise underscored the "national danger of depopulated regions."[103]

Amazonian elites' bragging rights melded the unrequited patriotism of frontiersmen with insider knowledge of the forest's cultural ecology. Lambasting their "unpatriotic abandonment" by the central government, they sought to shame the commanders of state in Rio de Janeiro by questioning where Brazil's true defenders resided.[104] Whether boasting to the president of the "feat of Brazilianess [*brasilidade*] that we are undertaking in this stretch of our nation," or proposing to erect a monument in Manaus to honor the rubber tapper, "the obscure hero who expanded Brazilian dominions," Amazonian merchants, politicians, and intellectuals reminded compatriots near and far that braving the forest and settling the hinterland represented the consummate act of nationalism.[105]

Truth claims also pivoted on the knowledge of Amazonian nature bred by local experience. Raymundo Moraes, for example, slammed foreign writers (and the occasional Brazilian snob) for their tendency to "exaggerate and fantasize [about] our nature, and to misrepresent fauna, flora, water, and land."[106] In a related tack, a Porto Velho newspaper charged that although much had been written about the Amazon and its "multiple problems," such diagnoses "have been the product of hoity-toity reporters who are horrified by mosquitoes and who cannot bear [their skin] turning yellow from the prophylactic [anti-malarial] atabrine."[107] And rebutting theories of environmental and racial determinism, Aurélio Pinheiro noted in *À margem do Amazonas* that the Amazon long ago welcomed immigrants from Iberia and the Mediterranean whose descendants now thrived in the region.[108] The defense of place also clearly went hand-in-glove with that of local hierarchies. The Amazon may have been no tropical miasma, but state congressman Francisco Galvão of Amazonas reproached forest dwellers for aspiring to "nothing more than having the land, water, and trees furnish them with enviable prodigality."[109] In sum, Amazonian elites understood that claims to environmental knowledge and political legitimacy were indissociable.

In 1943, Gilberto Freyre, a paladin of (northeastern) regionalism, stated: "Brazil should never commit the travesty of imposing an imperial uniformity, in a Philippic manner, or become integrated in a system of continental uniformity or in a single, rigid, absolute national culture that

Figure 1.4 Álvaro Maia, the federally appointed governor of Amazonas from 1937 to 1945, seated on right, surrounded by members of the press corps. *Source*: National Archives.

sacrifices its regional differences."[110] Yet Freyre's defense of "regional" cultures may be better understood as a political tool by Brazilian elites on the nation's periphery to secure federal assistance while safeguarding local privilege.[111] Indeed, as Pierre Bourdieu has noted, the celebration of regional culture serves as a "performative discourse" that seeks to legitimize new definitions of boundaries and make the unknown delimited and acknowledged, rather than the dominant definition that, recognized and legitimate, ignores it.[112]

The cultural politics of Álvaro Maia, the federally appointed governor (*interventor*) in the state of Amazonas during the Estado Novo, exemplifies this strategic positioning of regional elites vis-à-vis Brazil's central government (see figure 1.4). Born in 1893 to a rubber boss (*seringalista*) from Humaitá, Maia obtained a law degree in Rio de Janeiro. Returning to Amazonas, Maia joined a circle of intellectuals whose interwar literary production highlighted the state's history, cultural ecology, and political marginalization.[113] Yet notwithstanding, or because of, such local pride, Maia would later serve as the primary executor of the Vargas regime's integrationist project in the Amazon.[114] The Estado Novo, in turn, show-

cased Amazonian regionalism. Between March 1941 and October 1945, *Cultura Política*, the official Rio-based mouthpiece of the regime, published various articles on the rehabilitation of Amazonia, including a number penned by Amazonian intellectuals on regional culture.[115] In this sense, it is more appropriate to view region and nation in Brazil as mutually constructed through historical processes whose architects resided at the periphery as much as at the center.

Guardians of Frontiers: The Brazilian Military and Amazonian Geopolitics

At the time of World War II, the 60,000-man Brazilian army was primarily concentrated in the south of the country, reflecting the historic distrust toward Argentina as a regional rival as well as fear of subversive activities among German immigrant communities.[116] Over the course of the second half of the twentieth century, however, the defense of the Amazon would increasingly legitimize the role of the armed forces in Brazilian society—an ideological shift foreshadowed during the Vargas era.[117] Although Brazil's dominion of the basin had been guaranteed since the seventeenth century by control over the waterways and the seaborne trade at the mouth of the Amazon River, during the Vargas era the army warned of European and Japanese neo-Malthusian geopolitical designs, Spanish American military build-ups, and North American imperialism. A border dispute between Peru and Colombia (1932–33), the status of Dutch and French colonies in Guyana following the Nazi invasion of France and the Netherlands (1940), and skirmishes between Ecuador and Peru (1941) further highlighted the tenuousness of national sovereignty in the Amazon.[118] Shifting conceptions of national defense served to extend the Brazilian military's reach into the Amazon; or viewed another way, the forest had given soldiers their marching orders.

The military foray into the Amazon under Vargas advanced on various fronts. One literal marker was the delimitation of Brazil's northern borders in a physical and symbolic bounding of the nation-state.[119] Commander Braz Dias de Aguiar headed the Comissão Brasileira Demarcadora de Limites that demarcated the 593-kilometer border with Suriname between 1930 and 1938; as well as the 1,606-kilometer border with British Guyana; the 1,644-kilometer boundary with Colombia (1930–37); and the 2,199-kilometer border with Venezuela, which was begun in 1930, suspended four years later, and reinitiated in 1939.[120] Concomitantly, the military undertook demographic surveys of the borderlands regions.[121]

The militarization of borderlands, state-directed colonization, and federalization of Amazonian territory—projects all dear to the Brazilian army—likewise came to fruition under the Estado Novo. While General Pedro Aurélio Goes Monteiro's proposal to carve out federal territories from the large Amazonian states failed to pass in the Constituent Assembly of 1933–34, his dream would come true one decade later in September 1943 with the wartime creation of Amapá, severed from Pará (and bordering French Guiana); of Rio Branco, excised from Amazonas (bordering Venezuela); and of Guaporé, from northwestern Mato Grosso and a small portion of Amazonas (bordering Bolivia).[122] Acre had been a federal territory since annexation from Bolivia under the Treaty of Petrópolis of 1903. Colonization within 150 kilometers of the border necessitated authorization from the National Security Council, while the Ministry of War was entrusted with the creation of military colonies in the borderlands.[123]

The Brazilian military depicted the Amazon as endangered territory.[124] It was hardly reassuring to Brazilian army officers, for example, that the Amazon's population was not only sparse but huddled close to the riverbanks—Pará's inhabitants congregated within a two-mile strip on each side of the main rivers and their tributaries—or that the east-to-west flow of the river system bedeviled commercial links with the industrializing south.[125] Although prominent European geopolitical theorists did not apply their ideas about population pressure, space, and the state to South America, Malthusian panics gripping the North Atlantic offered the Brazilian army a rallying cry. Thus, in a 1938 report to the National Security Council, border inspector Colonel Manoel Alexandrino Ferreira da Cunha warned that Brazil's historic riverine dominion of the Amazon was now threatened by the airplane, which allowed for potential penetration of remote regions by parachute troops, and by a Peruvian road-building project that linked Lima to colonization areas on the Huallaga River, with a projected extension to the waterways of the Ucayali.[126] Although da Cunha deemed an imminent invasion unlikely, he advocated the creation of Brazilian military and civilian colonies in the Amazon linked by land, air, and river.[127] In a similar vein, Lieutenant Aluízio Ferreira denounced "foreign infiltration" in the Guaporé valley by merchants of Arab, Jewish, Greek, and Bolivian origin, and warned of Bolivia's demographic and military preponderance in the border town of Guayaramerín.[128] Like the insider snapshots of Amazonian elites, geopolitical discourse was a form of landscape portraiture whose artists, too, recognized that the most influential patrons resided in Brazil's metropo-

lises. Ferreira, for example, took up the cause of frontier colonization and defense with the press and the Sociedade de Amigos de Alberto Torres, a Rio-based organization concerned with national issues. (Vargas rewarded Ferreira for his pluck: in 1943, he was named governor of the newly created federal territory of Guaporé, the present-day state of Rondônia.)

A principal strand of Brazilian geopolitical thought of the 1930s heralded the expansion of the nation's sphere of influence over the Amazon Basin, the Pacific, and the Caribbean.[129] Endorsing state-directed colonization of the hinterland, for example, the director of the DNI, Péricles Melo Carvalho, affirmed that in an era where countries waged war to obtain "living space" [*Lebensraum*], only "strong nations" would survive by "resisting attempts at their [territorial] disintegration."[130] Likewise, army captain Mario Travassos's *Projeção Continental do Brasil* (1931) touted the nation's ineluctable rise to *grandeza*, or superpower status, based on westward expansion. In a bid for continental supremacy over Argentina, Travassos urged national development along an east-west axis—one along the Amazon River and a second across Mato Grosso aimed at the resource-rich heartland of Bolivia. Travassos's ideological eclecticism—melding Rudolf Kjellen's theory of the porousness of territorial boundaries with Halford Mackinder's creed that control of the continental "heartland" held the key to military superiority—championed not only Brazilian dominion over Amazonia but of Bolivia as well. In sum, Travassos articulated, and foreshadowed, Brazil's push for hegemony in South America.[131]

Geopolitical theories emanated mainly from military officials and a handful of geographers during the Vargas era, but their mantras permeated the media and public policy discussions, breathing new life into old ideas. The nation's political elite had long labored to "civilize" the backlands, as evinced by the suppression of nineteenth-century regional revolts and the Canudos and Contestado millenarian communities.[132] Or as Estado Novo ideologue Azevedo Amaral opined in explicitly racialized terms, in a national territory marked by "irregularity in the distribution of geographic zones of miscegenation, it is unquestionable that the values of the white race adhere in elevated forms of social organization and the achievement of greater dominion over the forces of nature through the extension of fields of knowledge."[133] In this sense, Vargas-era geopolitical ideas, like nineteenth-century scientific racism or Cold War counterinsurgency ideology, offered authoritarian modernizers in Brazil a compelling, if not altogether new, language to legitimize the state's concentration of power and exercise of social control.[134]

Healing Amazonia

Among the reformers of the Amazon, physicians and sanitarians ranked prominently as well. In a strict scientific purview, they strove to marshal medical and epidemiological knowledge to combat transmissible diseases and improve the quality of life and productivity of the region's inhabitants. For example, the Belém-based Instituto de Patologia Experimental do Norte (IPEN), established in 1936, boasted a hospital and research laboratory, and a staff of pathologists, entomologists, and zoologists who conducted extensive research on malaria, leishmaniasis, and trypanosomiasis in Pará.[135] Yet in scrutinizing the lifestyles of the poor and their relationship with the natural environment, health officials in the Amazon also operated as formulators of public policy and arbiters of national character. More broadly, in identifying pathogens and treatments, health care professionals sought to remold social perceptions of nature and politics.

Since the Republic, a cadre of physicians, army officials, politicians, and intellectuals had called for the coordination of public health policies in Brazil. While early projects had concentrated on urban areas and port cities, during the decade of 1910–20 *sanitaristas* took part in backland expeditions to study health and social conditions.[136] Sanitation campaigns in Amazonia mirrored such patterns. Between 1910 and 1911, Oswaldo Cruz eradicated yellow fever in Belém by eliminating the *Aedes aegypti* and their larvae, and by quarantining infected patients during the period of potential transmission by the mosquito. Two years later, Cruz devised a program for the Superintendência de Defesa da Borracha focused on a malaria control program targeting its human hosts (rather than mosquito control and eradication), advocating widespread use of quinine and bed nets, and the creation of mobile sanitation posts to administer and standardize doses of quinine to rubber tappers.[137] Amazonian physicians also participated in these early public health campaigns. In 1918, a medical school was founded in Belém. Two distinguished doctors from Pará who studied at the Instituto Oswaldo Cruz—Antonio Periassu and Jayme Aben-Athar—became specialists in the fields of malaria and leprosy, respectively. In the 1920s, the Serviço de Profilaxia Rural, directed by Aben-Athar in Pará and Samuel Ochoa in Amazonas, undertook initial efforts at rural sanitation.[138]

Following the establishment of the Ministry of Health and Education in 1930, the Vargas regime increasingly coordinated public health

services in Brazil, particularly in combatting rural epidemic diseases.[139] In 1937, João de Barros Barreto, the director of the Ministry's National Health Department, created eight regional health precincts and twelve national services dedicated to specific diseases and/or public health areas, and moved to replace medical doctors with sanitarians as directors of public health campaigns.[140]

A pioneer in epidemiology in the Amazon during this period was Evandro Chagas. Born in 1905 to renowned parasitologist Carlos Chagas, Evandro served as a medical doctor, biologist, and director of the laboratory of the Instituto Oswaldo Cruz—all before he turned thirty-five. Evandro Chagas helped found IPEN (which also boasted on its staff parasitologist Leonidas Deane, a native son of Pará and professor of microbiology), and conducted malaria surveys in the Amazon for the projected sanitation campaigns of the Serviço de Estudos de Grandes Endemias.[141] Chagas traveled in international circles—visiting the Rockefeller Foundation's International Health Division in New York, presenting his work at international congresses, and keeping abreast of global research on malaria.[142] He also drew upon the first-hand knowledge of the medical community in Brazil. Indeed, it was his father who had noted that malaria was so endemic in the Amazon that rubber tappers considered only its acute feverish state as illness and thus often refused to take quinine, and that spleen enlargement in children, reflective of repeated infection from the disease, was so commonplace as to be considered merely a "swollen belly."[143] After Evandro Chagas's untimely death in November 1940, minister of health Barreto pressed the Instituto Oswaldo Cruz to use preliminary data gathered in twelve Amazon towns to lay the groundwork for public health programs.[144] This agenda would be considerably expanded subsequent to the accords signed between the Brazilian and U.S. governments in June 1942, which created a binational public health service in the Amazon (see chapter 2).

Physicians in Brazil, however, operated more broadly as remodelers of natural and political landscapes. As Julyan Peard has shown, a number of prominent doctors in nineteenth-century Bahia challenged dominant understandings of geography, attributing so-called tropical diseases to social conditions and customs rather than climatological factors.[145] In ascribing the Amazon's epidemiological conditions to poverty and government inaction, Vargas-era physicians continued to wage battle against climatic determinism. To be sure, by the 1920s most physicians worldwide refuted the notion that tropical climates impaired human physiology, up-

holding that proper sanitation, hygiene, medical care, and personal discipline would allow for white acclimatization in the tropics or, at the very least, the rationalized extraction of its natural resources by a reformed native population. Yet U.S. and European physicians continued to debate the potentially "enervating" effects of warm climates on the mental composition of whites (so-called tropical neurasthenia), while germ theory fueled pervasive fears of pathological native bodies and unhygienic practice as breeding grounds for contagious disease.[146] Vargas-era physicians scrubbed away residues of climatic and racial determinism, even as they harbored and reinforced deep biases against the lifestyles and milieux of poor populations.

In the Amazon, perhaps the most renowned Vargas-era physician-cum-social scientist was José Francisco de Araújo Lima. Born on the island of Marajó in 1884, Lima attended medical school in Paris and interned at the Pasteur Institute. Upon returning to Brazil, he practiced medicine in Manaus and held a distinguished record of public service as school superintendent in Amazonas, mayor of Manaus, and federal congressman during the Republic. But Lima perhaps became most widely known outside his hometown as the author of *Amazônia—A Terra e o Homem*, first published in 1933. As a physician, Lima's familiarity with germ theory and medical prophylaxis led him to reject climatic explanations for Amazonia's social or physical ills. Slamming Baron de Montesquieu, Ellsworth Huntington, and even Euclides da Cunha for their rants against tropical climates, Lima noted that Amazonia was neither heaven nor hell. Improvements in nutrition, public health, education, and public policy would enable humans to transform the nature of the Amazon.

Yet Lima's repudiation of climatic determinism was compromised by neo-Lamarckian principles upholding the importance of culture and environment for human heredity. According to Lima, while the environment did not determine physical anatomy, it did shape the psychological realm: the geographic isolation marking forest-dwellers' extraction of natural resources reportedly ingrained reclusiveness and suspicion, stunting the mental acuity and cultural know-how to transform nature through the application of scientific logic. Only "savages allowed themselves to be enslaved" to nature's whims, he noted, while "cultured and advanced man modifies the environment with the apparatuses that science inspires and industry produces."[147]

Amazonia's vast territory and scattered population did attenuate state power, increase transportation costs, bedevil access to medical care, and

abet monopolistic practices. Yet Amazonia's natural and political landscapes had been anthropogenically shaped and historically patterned rather than psychologically wired, as Lima suggested. And although geographically isolated and subsistence-oriented, Amazonia's rural poor were linked to economic markets through intermediaries who processed their products and furnished consumer goods under inequitable terms of exchange. As a medical doctor, Lima had claimed the scientific objectivity to diagnose and cure the Amazon's problems, but his class and professional bias led to a tendentious rendering of nature and politics: one that represented lifestyles and landscapes in the Amazon as victims as much as spoilers of society.

Engineers of Amazonian Development

Engineers were also prime movers in the Amazon's transformation, implanting the infrastructure that channeled flows of people, goods, and information. Although institutional histories have viewed engineers in Brazil as distanced from political decision-making due to their underrepresentation in legislative assemblies, the claim reflects a reductionist understanding of the political realm.[148] Since the nineteenth century, engineers' skills placed them at the vanguard of modernization in Brazil via the construction of public works, the extension of railroads and more rapid forms of communication, and the procurement and transformation of raw industrial materials. More broadly, engineers spearheaded the reorganization of space and human behavior through the dissemination of new regimens and principles of efficiency, speed, and thrift and the interweaving of cities and hinterlands.[149] A federal decree of December 1933 standardized the accreditation of engineers in Brazil, consonant with official regulation of other white-collar professions during the Vargas era.[150]

During the Estado Novo, engineers in Brazil could lay claim to their craft's decades-long experience with railroad and telegraph line construction, geological exploration, border demarcation, and population resettlement. Indeed, between 1890 and 1915, the Comissão das Linhas Telegráficas e Estratégicas de Mato Grosso e Amazonas, under the direction of army engineer Cândido Mariano da Silva Rondon, linked Rio de Janeiro by telegraph line to Brazil's northwestern regions.[151] By the first decade of the century, engineers had also incorporated Belém and Manaus into the national telegraph network, with the latter city connected by thousands of kilometers of subfluvial cable laid in the Amazon River. Cartography, geographic surveillance, and border demarcation were also executed by

engineers: in 1901, Luis Cruls led an expedition to delimit the border with Peru on the Javari River, while Euclides da Cunha participated in the delimitation of the border on the upper Purus River in 1905. And under the aegis of the Serviço Geológico e Mineralógico do Brasil, created in 1907, engineers undertook a systematic geological study of the Amazon Basin, prospecting for coal and mineral resources and petroleum deposits in the Maués region of Amazonas.[152] From their work in Brazil's hinterland, engineers obtained ethnographic, geographic, geological, and botanical knowledge, not to mention manly bragging rights. As engineer Pedro de Moura recounted his experience conducting geological exploration in Amazonia in the 1930s: "In those pioneering days, the geologist suffered a monotonous life, day after day, in a thatch hut with a dirt floor, a kerosene lamp, with no way to read or to get news from the rest of the world. Bathing was in the river, sometimes with alligators in sight. The monotony was only broken when every forty or sixty days the ship of the Amazon River Line arrived with month-old newspapers. That was party time, just to be able to get a hold of an ice cube."[153]

As administrators of the Ministry of Transportation and Public Works' drought relief projects in the semi-arid northeastern backlands, engineers also saw first-hand the population exodus in the Amazon.[154] Thus, in 1942, the federal government's Council on Immigration and Colonization dispatched Dulphe Pinheiro Machado, founder of the Instituto de Engenharia de São Paulo, to investigate drought conditions in the northeast and recommend measures to resettle populations to the Amazon. Later that year, the Vargas government entrusted his colleague Paulo Assis Ribeiro with coordinating the wartime transfer of tens of thousands of nordestino men to the Amazon (see chapter 4).

Touting the profession's expertise in regimenting (human) nature, the journal *Engenheiro* would note: "The engineer is the individual who after many years of study is prepared and trained to realize the dreams and ideas of all sectors of society through the execution of works and projects. In the meanwhile, a tremendous responsibility rests on their shoulders."[155] Yet Vargas-era engineers are perhaps better understood as mediators between landscapes and polities that they had, in part, helped to produce.

Managers of Plants and People

As plant specialists, Brazilian agronomists, botanists, and biologists likewise aimed to wrest order and profit from the forest tangle. As the Belém-

based *Norte Agronômico* affirmed in 1942: "Amazonia is a world to organize, in all ways, whether economically, financially, culturally, politically, and socially. The organization of labor [is needed] for the organization of production and efficiency in landholding. Why not make the agronomist the mastermind of this organization that, sooner or later, Amazonia awaits."[156] Plant scientists also roamed as evangelists of nationalism in the backlands. The journal of the School of Agronomy of Pará, for example, exhorted in 1943: "Brazilians! In the forests or on the rivers . . . your sentiment should be one: Love Brazil!"[157]

Prior to 1930, the Ministry of Agriculture had operated fourteen agricultural research stations throughout Brazil (none in the Amazon region), but studies focused on selection of seeds rather than experimentation and instruction and the units were often staffed by engineers rather than agronomists due to the lag in professional specialization.[158] The crisis of monocrop economies and the slump in global trade that ensued with the Great Depression underscored for policymakers the importance of diversifying agricultural production and managing natural resources in Brazil.[159] Indeed, during the Vargas era, the professional status and political influence of agronomists and plant scientists waxed: between 1937 and 1945, the Ministry of Agriculture was directed by two agronomists, Fernando Costa and Apolônio Sales. Moreover, amidst broader societal concern with health, fitness, and eugenics, plant scientists monitored popular diets for nutritional balance and vitamin intake (whose scientific discovery peaked between 1910 and 1940). A. J. de Sampaio, a botanist at the Museu Nacional in Rio de Janeiro, for example, called for improvements in the diets of poor populations of the northeast and the Amazon, and lambasted their "primitive method of harvesting and grazing that only leads them to ruin the natural habitat."[160] Sampaio also penned one of Brazil's early environmental texts—inspired by his participation in an international geography congress in Paris in 1931—in which he trumpeted the importance of protecting national flora and indigenous peoples to "diversify the enchantment of human life."[161]

In addition, the Vargas government created various federal instrumentalities and legal codes to regulate the usage of forests, minerals, and water; to guide research and policymaking for specific crops; to extend credit and technical assistance to smallholders; and to assist agriculturists in environmentally "challenging" regions.[162] Brazil's first Forest Code (1934) classified types of forests and regulated usage, while the Forest Service established nurseries for the production and distribution

of seedlings of forest plants to agriculturists, conducted studies of flora and timber, and oversaw the organization of national parks.[163] Brazil was on its way toward more systematic quantification of forest resources, a statistical regimen that remains fundamental to the representation, and by extension, the nature, of forests until this day.[164] As noted, Vargas also established the IAN, the first federally funded government agricultural research station for the Amazon region.

Following World War I, a number of plant scientists and biologists in Brazil and other Allied nations touted the capacity of their craft to improve agriculture, ensure social justice, and bridge national divides.[165] For example, Felisberto Camargo, the U.S.-trained agronomic engineer who served as IAN's first director (see figure 1.5), celebrated Brazil's "awakening to the potential agricultural importance of the vast Amazon Valley," asserting that South American leaf blight would be controllable through the use of insoluble copper-based fungicidal sprays and budding with blight-resistant clones.[166] His research partner, U.S. plant scientist Elmer Brandes, likewise predicted success for rubber plantations in the Amazon: "The problem resolves itself into just another job of scientific agriculture."[167] And in *Plants and Plant Science in Latin America* (1945), editor Frans Verdoorn championed the inter-American collaboration of biologists, who were "in a position to assist with the creation, not of a planned supreme State, but a government of free responsible men, which will guide human relations and world affairs according to the laws of living Nature, as discovered and set forth by biologists."[168]

In the Amazon, plant scientists would discover many "laws of living Nature"—often through the assistance of local, and professionally unacknowledged, informants. Yet they would also produce nature through modification, quantification, and representation. Botanists' battle against South American leaf blight, cast as the struggle of science against nature, is a case in point. By nature, rubber trees grew dispersed in the forests of the Amazon, protected against the spread of leaf blight by the foliage of trees of other genera.[169] Thus, the pathogen's "natural" virulence accrued from anthropogenic modification of Amazonian ecosystems to cultivate *Hevea brasiliensis* in dense stands for the maximal extraction of latex—a viscous resin whose organic function served to repel insect pests from the tree, rather than for industrial application as rubber.[170] Nor could the laws of "living Nature" smoothly "guide human relations" in the Amazon when scientists proved handmaidens as much as hostages to political partisanship, class interests, and national agendas.

Figure 1.5 Felisberto Camargo, first director of the Instituto Agronômico do Norte, with young rubber trees planted at the research institute. *Source*: National Archives.

Drawing Boundaries: Geographers and the Delimitation of Amazonia

During the Vargas era, applied geography held forth the possibility of remodeling the Amazon through scientific study and public planning. Given Brazil's territorial expanse, resource abundance, sparse settlement, and weak interregional articulation, geographic knowledge had long bolstered claims to political problem-solving.[171] Amidst geography's contested and pluralist tradition, adepts in Brazil favored Frenchman Paul Vidal de la Blache's regionalist study, which postulated that human communities were shaped by distinct natural milieux, but capable of transforming socioenvironmental conditions. Although repudiating en-

vironmental determinism, geographers in Brazil nevertheless naturalized territorial divides and cultural essences.[172] Amazonia's deficiencies were said to inhere not only in its demographic voids but in the extractive economies and "primitive" mindsets of populations that the protean landscape both reflected and inflected.

As an intellectual site where politics, space, and environment intersect, geography, like history, offers an ideal medium to foment nationalist sentiment.[173] Brazilian elites' formal interest in the study of geography dates back to the Instituto Histórico e Geográfico Brasileiro (IHGB), founded in 1838, which sponsored field trips, collection missions, and cartography to learn more about the hinterland. Most of the IHGB's nineteenth-century members, however, were self-taught readers of European geographic texts and observers of the environment, rather than formally trained geographers, since geography had not yet been established as a discrete academic discipline in Brazil. Among the first generation of professional geographers that emerged in Brazil during the 1910s and 1920s—which included Carlos Delgado de Carvalho, Fernando Antonio Raja Gabaglia, Everardo Backheuser, and José Veríssimo—several had been educated in Europe and had been involved with the Escola Livre Superior de Geografia, created in 1926. In the early 1930s, military geography became a required subject in Brazilian army academies, and officials with geographic training came to serve in the IHGB and the Sociedade de Geografia do Rio de Janeiro.[174]

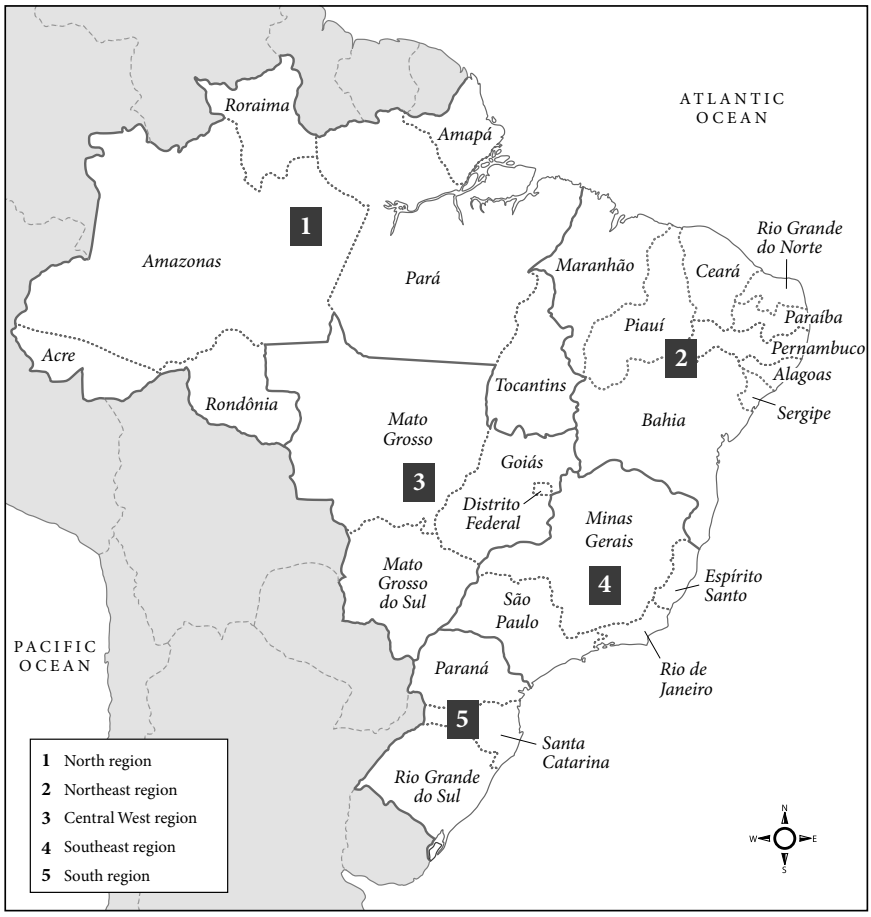
Under Vargas, the study of geography migrated from the social clubs and the army academies to Brazilian universities and the state's administrative apparatus, constituting a new professional class and a "scientific" standard for comparative analysis of regional and national development.[175] The Universidade do Distrito Federal and the Universidade de São Paulo created academic lines (*cadeiras*) in geography in the 1930s; at the latter institution, geographers Pierre Deffontaines and Pierre Monbeig arrived as part of the French "mission" to professionalize the social sciences in Brazil.[176] In 1937, the federal government established the Conselho Nacional de Geografia to coordinate geographic research, data collection, and public planning; the council was incorporated the following year into the newly created Instituto Brasileiro de Geografia e Estatística (IBGE), a government bureau that paired geography with statistics, marshaling numerical forms to represent social realities.[177] Although geographers brought the conceit of science to state building during the Vargas era, it is more accurate to place their ways of looking at the world in

the historical context of Brazilian state formation, rather than viewing the discipline as growing up to serve state expansionism.[178]

With Amazonia as a battleground, geographers in Brazil declared war on theories of environmental determinism.[179] Challenging the image of a tropical inferno, the National Geography Council's official publication, *Revista Brasileira de Geografia*, published the recorded average temperatures and rainfall levels in various regions of the Amazon.[180] Disavowing Anglo-American geographers' fears of white degeneration in the tropics, Deffontaines asserted that Amazonia "was colonized by a predominantly white human type [northeastern backland peasants] fleeing near-desert steppes; Manaus is a beautiful city with a European aspect, with a population almost entirely white, and the only important white city on the Equator. Human nature has shown here a unique adaptability."[181] And insisting that the Amazon's demographic vacuums were transformable through state-directed settlement, Delgado de Carvalho affirmed: "land policies and colonization constitute elements that play such an important role in the geography of the great powers that space no longer provides the explanation for all that we are witnessing."[182]

The theories advanced by Vargas-era geographers, however, also reinscribed Brazilian spatial divides and social hierarchies. The IBGE's administrative division of the nation held that the "natural region"—defined as a space possessing "typical characteristics in geology, topography, ecology, climatology, and corresponding reflections in cultural manifestations of human geography"—offered the most effective basis for analyzing Brazilian realities.[183] Thus, Delgado de Carvalho lamented that under the Republic's state-based administrative division, Amazonas and Pará had been "brutally cut in two parts," deprived of the "beautiful geological harmony and the majesty of its great [river] artery, whose unity, whose economy constitute a world unto itself."[184] Similarly, the IBGE's delimitation of the states of Amazonas and Pará and the federal territory of Acre under the "northern" region—narrowing a geographic designation heretofore applied by southern Brazilians to both the Amazon and the northeast—hinged on the contrast between the Amazon's wide rivers and humid forests and the semi-arid northeast, and the "problems [that] are manifested and derive from geographic facts, arising principally from the imperatives of the physical medium."[185]

The compartmentalization of the Amazon occurred through other forums as well. From its inception in 1939, *Revista Brasileira de Geografia* published numerous articles, photographs, maps, and drawings to docu-



Map 1.1 Current IBGE Regional Division of Brazil

ment the distinctive flora, fauna, soils, and climate of the Amazon (see map 1.1). Moreover, between 1939 and 1944, the *Revista* dedicated nine entries to "human types and aspects of Amazonia"—including cowboys from Marajó Island, alligator hunters, and rubber tappers—who were said to define and to be defined by their natural region.[186] In 1942, the quatercentenary of Orellana's historic voyage, the *Revista* devoted two volumes to Amazonia, later reissued in a hefty tome entitled *Amazônia Brasileira* (1944).

Geographers drew boundaries in Brazil: they delimited external borders, segmented internal space and sociocultural hierarchies, and patrolled divides between so-called realms of nature and society. They had not invented, of course, aspects of regional geographies. Rivers, alli-

gators, rubber tappers, and Manaus's (small) white population were factors that very much comprised the "natural region" of the Amazon. The day-to-day struggles of an Amazonian extractivist surely had little in common with a São Paulo businessman—even if it might with a *paulista* peasant and Manaus-based import-export merchant, respectively. Yet depictions of Brazilian regions as static and distinct entities also reinforced erroneous notions of fixity in time and space, rather than fluidity and interconnectedness.[187] Landscapes and lifestyles in the Amazon were as much the product of networks of trade, migration, politics, and ideologies as of ecosystems, yet geographers laid claim to science to naturalize divides. Moreover, geographers' evolutionary theories, measuring a group's "civilization" by its "independence" from nature, condemned (and mischaracterized) forest dwellers' adaptive extractive and subsistence economies, while upholding prospective northeastern migrants as "more amenable to progress."[188] While dualistic categories have long been imposed on landscapes and populations, the approach of modern states may vary not only because of the attempt to draw strict boundaries between multiple categories of people and space but also because of the greater technical, bureaucratic, and coercive power of modern states to control people and transform landscapes.[189] Demarcating borders, Vargas-era geographers assumed as well the role of customs officials in designating the proper relationships between humans and the environment in the Amazon.

Amazonia's Cultural Brokers

The invention of Amazonia through varied literary genres and visual arts has been amply explored in the field of cultural studies.[190] Since representations of realities should be seen as no less the work of artists than scientists, nor the concept of "culture" affixed to the arts rather than the multiple markers of power and protest in society, our investigation into the making of the Amazon during the Vargas era has ranged heretofore beyond the salon and museum. In any event, representations of the Amazon were not marked by a strict boundary between the arts and sciences: just as natural and social scientists took certain artistic license in depicting the Amazon, literati emulated scientific texts in detailing the role of nature in shaping human destinies.[191] When essayist Clodomir Vianna Moog wrote of the prospect of aerial fumigation of Amazonian cities to eradicate mosquitoes, air-conditioned housing to balance the effects of heat and humidity on the human organism, and the creation of peasant

cooperatives under the direction of engineers and agronomists, author Monteiro Lobato hailed his colleague's skillful use of "scientific method" which eschewed "excessive lyricism."[192]

Yet literature, the arts, and the nascent leisure industries in Vargas-era Brazil did have their distinct set of producers and circuits. José Maria Ferreira de Castro's *A Selva* (1930), which denounced the brutalization of tappers as a metaphor for social injustice in Brazil, drew on an intellectual tradition dating back to the writings of Euclides da Cunha. And the designation of pre-Columbian Marajoara pottery and Portuguese colonial fortification in the Amazon as official national patrimony was established by federal officials in the newly created Serviço do Patrimônio Histórico e Artístico Nacional.[193] In this vein, two twentieth-century Brazilian literary classics depicting Amazonia that circulated during the Vargas era were Mário de Andrade's *Macunaíma* (1928) and Raul Bopp's *Cobra Norato* (1931).

Modernist writers from southern Brazil, Bopp and Andrade had each traveled to the Amazon in the 1920s in search of the nation's organic roots, inspired by the European avant-garde and the anthropological fascination with the "primitive."[194] As Antônio Cândido argues, the cultural complexities of Brazil, an ethnically mestizo Latin nation situated in the tropics, had been historically idealized or ignored by the nation's intellectuals; modernism broke this mold, celebrating the toughness of tropical nature and the truculence of the Indian as a source of cultural elaboration.[195] And as Roberto González Echeverría notes more generally, the Latin American novel of the 1930s moved from scientific discourse to anthropology, emulating ethnography's search for knowledge, truth-bearing, and the origins of being in the cultural values, beliefs, and histories of non-Western societies.[196] In the Amazon, Brazilian modernists found a rich repository of material, reworking regional themes into markers of national distinctiveness.[197]

Bopp and Andrade further sought to parlay their affinities for the Amazon into public policy initiatives. As secretary of the Federal Foreign Trade Commission in Buenos Aires, Bopp wrote Vargas in the late 1930s of the geopolitical significance of the Amazon River ("the spinal vertebrae" of Brazil), and warned of threats posed by U.S. hegemony in the Caribbean basin, North American scientific expeditions in the forest, and the Ford Corporation's rubber plantations. Bopp also opined that Belém would one day surpass the Argentine capital in importance due to its greater geographic proximity to New York and London.[198] For his

part, Mário de Andrade piloted ethnographic training for researchers at São Paulo's municipal department of culture, while serving as its director from 1935 to 1938, and endorsed the creation of the Sociedade de Etnografia e Folclore, the first of its kind in Brazil.[199] In 1938, Andrade dispatched a four-member Missão de Pesquisas Folclóricas to the Northeast and Belém to record and film "traditional" folk music and customs, which he believed were endangered by the onslaught of mass media.[200] The importance of Brazilian ethnographers in shaping public policies in the Amazon endures until today.[201]

Mass media during the Vargas era also aimed to mold popular perceptions of the Amazon. As a source of information and entertainment, a commercial venue, and the regime's soapbox, the radio had much to sell with (and in) Amazonia.[202] Some radio programs were aural travelogues of the old jungle book genre: between August 1936 and August 1937, for example, the Programa Infantil da Radio Jornal do Brasil broadcast reports by its director, Ariosto Espinheira, of his plane travels in the Amazon.[203] Other radio programs aimed to popularize the March to the West. The radio station of the Ministério da Educação e Saúde and the Radio Difusora da Prefeitura do Distrito Federal, for example, beamed forty speeches between 1939 and 1943 on topics such as agricultural modernization, frontier colonization, rubber tapping, and rural uplift. As Professor Genaro Vidal Leite Ribeiro exhorted in a September 1940 radio address entitled "Amazonia, a Vital Problem": "We cannot leave it abandoned any longer."[204] Film functioned, too, as a new medium to market the Amazon. During the 1920s, movies such as *No País do Amazonas* (1922), *Terra Encantada* (1923), and *No Rastro do Eldorado* (1925), made by the Portuguese Silvino Santos while residing in Manaus, had enjoyed significant success in Rio de Janeiro and in European cities. Brazil's first filmed cartoon, *Sinfonia Amazônica*, created by the Latini Brothers between 1939 and 1945, used the region's flora, fauna, and myths in its story lines.[205] And through its newsreel series, *Cinejornais brasileiros*, the Estado Novo's Departamento de Imprensa e Propaganda disseminated images of the Amazon. The short *O chefe do governo no Amazonas* contained footage of Vargas's Amazon River speech of October 10, 1940—an event officially commemorated each year throughout Brazil over the next five years.[206]

As Brazilian historiography has noted, there was much that was not new, or true, about Vargas's vaunted New State.[207] The Amazon region

had been the target of civilizing projects since the colonial period, while nineteenth-century positivist ideals of "Order and Progress," emblazoned on the national flag, acclaimed scientific capability to engineer socioenvironmental change.[208] Nor did the Estado Novo's penchant for overstatement and underachievement, bemoaned by revisionist historians, elude those like José Moraes do Carmo, a resident of Boca do Acre, Amazonas. In response to a 1939 questionnaire from the federal police chief regarding the regime's efficacy, Carmo stated, "today we are still in the same situation: without work, without schools, and even without justice."[209]

Yet the Vargas regime did respond to and inaugurate a new era in Brazilian politics. Amid the twin crises of the Great Depression and the Second World War, Brazil's industrial bourgeoisie ascended, as did a newly institutionalized technocratic sector. Vargas created Brazil's first truly coherent national government with the machinery to distribute aid and coordinate development at the national level, although public investment continued to be channeled primarily to the more industrial south.[210] New forms of cultural nationalism congealed from elements of popular tradition and modernist expression.[211] And Brazil's working class nudged its way onto the political scene, challenging facets of oligarchic rule and demanding new regulatory roles for the state in society.

The nationalization of the Amazon "question" during the Vargas era embodied such trends. As I have argued, a confluence of national and global factors propelled this transformation: the centralization of state power; the leap in import-substitution industrialization; the expansion of the industrial bourgeoisie and the professional class; global competition for the Amazon's natural resources; and the geopolitical anxieties of the militaries of Brazil and the United States. The Amazon's rehabilitation was launched through regime policies and pronouncements that promoted subsidized migration, agronomic research, rationalization of the rubber trade, nationalization of transport, and public health programs. And it was popularized through nationalist discourse that recast the Amazon as a metonym of Brazil: a region teeming with untold economic potential yet blighted by social injustice; a region of natural bounty desecrated by human depredation; a region with prodigious space cursed by interminable distance; a region inhabited by hardy but "deficient" populations; a region condemned by history yet liberated by science; a region deformed by open markets but restored by state regulation. The Amazon: the land of the future in the nation of the future. As Vargas affirmed in his speech in Manaus in October 1940: "In the same way that the image of

the river-sea [the Amazon River] is for Brazilians a measure of the greatness of Brazil, your problems, in sum, are those of the entire nation."[212]

This chapter has also shown how the dialectic process of region- and nation-building and, more broadly, the making of nature and politics, is effected through agents of states, scientific institutions, professional organizations, and media industries; through producers and consumers; through technologies and commodities; and through statistics, graphs, maps, discourses, and other forms of representation that serve to consolidate these seeming binaries. I have focused on the political projects and narratives of discrete class and professional sectors in Vargas-era Brazil, whose diverse truth claims to effect socioenvironmental change in the Amazon were anchored in a combination of scientific reasoning, professional expertise, and hands-on experience. These mediators did not invent physical realities of the Amazon any more than they created fixtures of Brazilian politics or the global economy, but their knowledge claims regarding regional landscapes and populations aimed to control and transform (human) nature. In forging national integration, they reinscribed regional and social inequalities in the spatial ordering of the New State.[213]

Historians of borderlands have long argued that the study of nations' boundaries—where geographic and social divides are fortified, transgressed, or blurred—can yield great insight into the formulation and contestation of national identities.[214] Scholars of Brazil have been slower to take up this intellectual challenge in Amazonia, perhaps due to the north's peripheral status in the nation's political economy, the relative precariousness of historical sources, or the difficulties of inserting Amazonia into dominant historiographic frameworks.[215] Or perhaps the low-level nature of warfare, the absence of mass deportations, and the powerlessness of indigenous victims of ethnic cleansing in the twentieth-century Brazilian Amazon have drawn less historical attention to this borderlands region than others. But as a geographic as much as a conceptual border, and an internal as much as an external boundary, the Amazon, in fact, can shed new light onto the making of region and nation in Brazil during the Vargas era.

Amazonia redefined the ambit of the Brazilian state under Vargas, much as the regime and its era would come to redefine the region. What had once been the millennial vision of colonial clerics or the fancy of nineteenth-century European naturalist-explorers in the thrall of science and imperial service was now the pursuit of varied Brazilian government

bureaucracies and newly institutionalized social sciences. From the site for laboratory research in the nineteenth century the Amazon became the laboratory *of* research in the twentieth century. And what had once been the backstage entreaties of backwater elites now resonated in the forefront of state policies and pronouncements toward a high-profile region.

With the advent of World War II, the scramble for raw materials and hemispheric defense would precipitate U.S. government intervention in the Brazilian Amazon as well. A set of U.S. actors—many sharing the scientific or professional training and the class biases of their Brazilian colleagues—sprung to leave their mark on the Amazon, much as the forest would abruptly come to overshadow U.S. politics and society. Yet U.S. demand for forest resources, stretching from Main Street to Wall Street and from the avenues of Pennsylvania to Pennsylvania Avenue, animated political projects and social imaginaries that were both diffuse and distinct. Binational wartime efforts to remake nature and society in the Amazon would reflect such overlapping and competing visions.

CHAPTER 2

"THE QUICKSANDS OF UNTRUSTWORTHY SUPPLY"

U.S. Rubber Dependency and the Lure of the Amazon

"It is probable that the past two years have seen more actual exploration of the basin, more knowledge gained about its physical nature than have all the four centuries since that early conquistador, Francisco de Orellana, was the first white commander to traverse it," an American author noted of the Amazon in 1944. Although the writer rehashed the image of untrodden territory, "knowable" only through exploration by whites, over the previous years the United States government had sent hundreds of clerks, administrators, engineers, airline pilots, agricultural technicians, and doctors into the Amazon to increase rubber yields, improve health conditions, and study possibilities of raising foodstuffs in the basin.[1] The Amazon starred in monographs, travelogues, films, novels, and newspapers in the United States, with bylines that announced that "the Amazon Valley may exert an effect far beyond its geographic province in its influence upon the human relations of the globe."[2] While most Americans focused on the European and Pacific military theaters, where thousands of loved ones fought and died, the heightened level of U.S. popular interest in the Amazon would probably only recur a half century later when tropical deforestation catapulted the region into a different geopolitical fracas.

Americans had turned to the Amazon in search of rubber. Following the Japanese invasion of the Malayan peninsula in May 1942, the United States lost access to 92 percent of its supply.[3] Be-

fore the mid-nineteenth century, national capability had depended less on the availability of resources for mechanized industry and urban populations than on the qualities of soldiers engaged in hand-to-hand fighting. But the growth of the iron and steel industry had transformed warfare, increasing the strategic importance of minerals and other raw materials as key determinants of national power.[4] Distinct from many other commodities derived from tropical flora, rubber was indispensable for modern warfare.[5] From airplanes, army trucks, tanks, battleships, motorcycles, gun mounts, bullet-sealing gasoline tanks, submarine storage battery jars, blimps, and barrage balloons to life rafts, hoses, raincoats, boots, and gas masks, rubber ensured the mobility, speed, and efficiency critical for military defense.[6] Indeed, the Second World War spurred voracious demand: U.S. national output of airplane tires jumped from 33,000 in 1939 to almost 1.5 million in 1944, and Americans would use more than 40 million heavy-duty truck tires between Pearl Harbor and the Japanese surrender.[7] In 1942, however, the United States had stockpiled only 578,000 tons of rubber, and even with anticipated imports of 53,000 tons for the following year, the nation would face a potential deficit of 211,000 tons for military use by January 1944.[8] Moreover, an additional 800,000 tons of rubber tire were required to keep more than 20 million civilian automobiles running to avoid grave economic disruption.[9]

In August 1942, President Franklin Roosevelt organized the Rubber Survey Committee to undertake a nonpartisan investigation of the shortage and to recommend policy directives. Chaired by businessman Bernard M. Baruch, and comprising James B. Conant and Karl T. Compton, the respective presidents of Harvard University and the Massachusetts Institute of Technology, the committee assembled a technical staff, consulted with chemists, chemical engineers, and rubber manufacturers, and heard testimony from government officials and industry representatives. In its final report of September 1942, the committee endorsed government development of synthetic manufacturing plants (largely on the basis of petroleum) as the cornerstone of the wartime rubber program, and the appointment of a rubber director to oversee policy.[10] The committee also recommended a policy of broad-based conservation.[11] In December 1942, the Roosevelt administration dropped the speed limit to 35 miles per hour (to prolong the life of tires), and imposed full-scale gasoline rationing to reduce tire use and to divert gasoline stocks for use in the manufacture of synthetic rubber.[12]

Although the committee prioritized the production of synthetics,

U.S. officials confronted the possibility of substantial output only after mid-1943, with full capacity of over one million tons projected for 1944. Aside from synthetic's start-up delays, the tires of heavy military vehicles, trucks, and buses required an admixture of natural rubber as high as 30 percent to ensure greater resilience, tensile strength, and tear-resistance. In aircraft tires, where high speeds, resistance to shock, and flexibility at low temperatures were more important than mere abrasion, synthetic was rarely used at all.[13] Thus, the Rubber Survey Committee also called for a minimum requirement of 41,000 tons of natural rubber for 1943 and procurement of 68,000 tons of raw rubber in 1944.[14] Sources of raw rubber were now confined to Ceylon and India (the largest producers of natural rubber remaining under Allied control), Africa, and Latin America.[15]

Since U.S. officials recognized that the price of natural rubber in an open market would skyrocket in response to war and consumer demands, international arrangements aimed to establish a cooperative system for the control of rubber consumption and the intensification of rubber production in all producing countries in the Western Hemisphere. Between March and October 1942, the State Department, in conjunction with the Rubber Development Corporation, negotiated agreements with sixteen rubber-producing countries in Latin America for the sale of their exportable surpluses of crude rubber and rubber manufactured goods to the United States for a term of years at a fixed price, and the limitation of local consumption. Brazil, the largest rubber producer in Latin America at the time, signed the first agreement on March 3, 1942. By 1940, annual rubber production in the Brazilian Amazon, extracted from wild trees, totaled a mere 16,000 to 18,000 tons, a smidge of the ravenous U.S. demand.[16] Yet amidst global turmoil, U.S. officials zeroed in on the Amazon Valley and, more precisely, its rubber trees.

As David Harvey notes, "To say that scarcity resides in nature and that natural limits exist is to ignore how scarcity is socially produced and how 'limits' are a social relation within nature (including human society) rather than some externally imposed necessity."[17] In September 1942, the Rubber Survey Committee essentially reached the same conclusion regarding the origins of the rubber crisis in the United States. The committee noted there were two types of "shortages": one where there is not enough to go around for essential purposes; another where enough material exists but is unavailable where it is urgently required. In most cases, the committee pointed out, the problem was the latter, due to the

use of materials for purposes not essential to the conduct of war; the lack of conservation, inventory control, and the finding of substitutes; and complicated or ineffective methods used to distribute materials and to control prices.[18]

Although sparked by the Japanese offensive in Southeast Asia, the wartime rubber crisis in the United States, like other public emergencies, derived from a complex configuration of political, socioeconomic, and cultural factors. Prior to Pearl Harbor, U.S. policy advisers had advanced three principal options to offset national dependency on Southeast Asian rubber: market diversification, domestic stockpiling, and the development of a synthetic industry. None was successfully pursued. Since the loss of Asian markets kindled U.S. wartime interest and public investment in the Amazon, laying bare the role of rubber goods as key mediators between tropical nature and domestic sociopolitical formations, this chapter explores the origins of the crisis, its repercussions in the valley, and its divisiveness for U.S. policymakers. Indeed, more than just a forest, the Amazon loomed, then as now, as a flashpoint for deeper American anxieties over modernity and national identity.

The Reign of Rubber

The history of industrial materials differs in their exploration, production, application, and geopolitical importance.[19] Resilient, flexible, waterproof, and airtight, rubber contains a number of features found only among certain plastics. It has a high abrasion resistance, far greater than steel or any other metal, is unaffected by the corrosive action of most common chemicals, insulates against electrical shock, and can be bonded firmly both to textiles and to steel.[20] Rubber's most distinguishing physical property is a special type of elasticity or "bounce" that allows it to stretch and then approximately regain its form.[21]

Rubber's pervasiveness in American life in the late 1930s, however, cannot be understood solely in terms of its "natural" adaptability. As Arjun Appadurai notes, even if we accept the anthropological insight that "things have no meanings apart from those that human transactions, attributions, and motivations endow them with . . . this formal truth does not illuminate the concrete, historical circulation of things. For that we have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories."[22] In fact, until the final third of the nineteenth century, rubber was a material of minor significance in the United States. In 1859, for example, the United States consumed

1,500 tons of crude rubber, and by 1900, only 27,000 tons, with footwear leading in usage.[23] By 1940, however, the United States used 648,000 tons of rubber per year—as much rubber as the rest of the world combined.[24] Or, in other terms, between 1910 and 1940 America's annual need for rubber increased from 1 to 10.5 pounds for every person.[25]

The jump in rubber consumption owed to the rapid transformation of the United States from an agrarian society to a mass-production economy in the early twentieth century.[26] By 1940, the United States, with 6 percent of the world's population and 7 percent of its land surface, produced half of the world's supply of finished industrial products and 75 percent of its motor vehicles. Along with iron, steel, coal, and petroleum, rubber became an essential material, entering into factory and household, farm and transportation facilities, peacetime goods and implements of warfare.[27] At the time of World War II, more than 40,000 uses of rubber existed, including the manufacture of motor vehicles, planes, submarines, balloons, gas masks, electric motors, ships, trains, streetcars, electric lights, telephones, typewriters, printers' tools, radios, surgical equipment, condoms, hoses, tubing, tractors, conveyor belts, milking machines, athletic goods, and shoes.[28] As Carter R. Bryan of the U.S. Department of Commerce noted in 1942, the history of rubber and its adaptations over the previous century—"a very short time in the life of mankind and the world"—was "symbolic of the progress achieved by man in the past 100 years."[29]

Rubber's leading application in the United States at the time of the Second World War was in the tire industry, where it blazed a trail in individualized, long-distance transportation. From 1938 to 1940, 76.6 percent of all crude rubber consumed in the United States went into tires, inner tubes, and tire sundries, with pneumatic automobile tires accounting for 85 percent of this total.[30] While there had been only four automobiles in the United States in 1896, and just 650,000 at the time of the first Indianapolis 500 in 1911, there were over 28 million cars by 1940—or one car for every four persons.[31] The number of motor trucks in the United States also mushroomed from 1,100 in 1906 to about 4,750,000 in 1940.[32]

As James Flink notes, the unparalleled market for motor vehicles in the United States owed to various factors. With its vast land area and hinterland of scattered and isolated settlements and relatively low population densities, the United States had a greater need for individualized automotive transportation than the nations of Western Europe. More im-

portant, a higher per capita income and more equitable income distribution allowed Americans to take advantage of mass automobile ownership a generation ahead of Europeans. These market conditions, combined with low raw material costs and a chronic shortage of labor, especially skilled workers, encouraged the mechanization of industrial processes in the United States, necessitating the standardization of industrial products and volume production. The automobile boom of the 1920s also owed to an unprecedented expansion of consumer installment credit to finance sales, cementing the middle-class pattern of purchasing expensive consumer goods on credit as a mainstay of the U.S. economy.[33]

Breaking down barriers of time and space, the motor vehicle revolutionized American society. Trucks facilitated long-distance hauling, reducing the delay, damages, and labor expenses associated with railway freight shipments. The automobile decentralized urban space, enabling some thirteen million Americans by 1940 to live in communities lacking public transportation, and expanding social networks beyond nearby friends and family. Rural families could more readily avail themselves of urban amenities, and migrant workers obtained greater geographic mobility. The automobile offered middle-class women escape from the domestic sphere and access to employment, consumerism, and leisure through a form of transportation promising a measure of privacy, safety, and speed unmatched by public transit. The car undercut parental supervision and authority, and abetted romantic adventurers, adulterers, and prostitutes. It helped to sustain entertainment and recreation based on mass participation, allowed for extended vacations away from home (heretofore the privilege of the rich), stimulated the outdoor movement, and fueled strong public support for the acquisition of parklands and the conservation of natural resources. Bridging regional, sectional, and urban-rural divides, the car served to homogenize America's cultural landscape.[34] As one author noted of motor vehicle transportation: "It has contributed tremendously to the result that from the Atlantic to the Pacific and from the Great Lakes to the Gulf, our people speak the same language, serve the same flag, respond to the same impulses, and are guided by common ideals."[35] Automobiles relieved the stress and tedium of modern life, even as they contributed to them.

Wherever the automobile went, rubber goods rolled along. An average automobile contained around three hundred rubber parts, but the most prominent, of course, were the tires. As automobile makers increased vehicular weight and speed capacity, rubber manufacturers built

larger tires and introduced antiskidding treads to ensure riding comfort. The balloon tire, introduced by Firestone in 1923, had 30 percent more rubber than older tires and twice the air capacity. The higher velocity at which autos could travel, in turn, called for four-wheel brakes, while the absence of vibration rattles encouraged more customers to buy closed cars, promoting year-round riding.[36] American consumers also witnessed dramatic improvements in the life span and price of tires.[37] Compounding ingredients and fabric ensured strength, stiffness, and durability; layered plies of rubber-impregnated cotton fabric formed a strong, yet flexible, side wall; carbon black, obtained by the incomplete combustion of natural gas and added to the treads, resisted abrasion; and additives retarded oxidation which, left unchecked, restricted the life span of rubber to merely two or three years after its manufacture.[38] Whereas in 1908 an automobile tire cost from $35 to $125 and was usually good for only 2,000 miles of service, by 1936 it cost between $8 and $25 and lasted for 20,000 miles on average.[39] Small wonder rubber manufacturers trumpeted the industry's contribution to the miracle of motordom. As Harvey Firestone Jr. quipped: "Have you not noticed how hard the going is when one or more of your tires is flat?"[40]

In transforming realms of production, transportation, communication, commerce, hygiene, sexuality, and leisure in the United States, rubber fanned the twentieth-century whirlwind of unfettered individualism and dispiriting impersonality.[41] I do not mean to advance here the notion of history determined by technology: innovations in the manufacture and application of rubber goods were both the producers and products of political, economic, and cultural changes in American society—changes effected by human actors. But rubber goods enabled distinct societal configurations in the United States, while their materialization from tree resin seemingly delivered on the ideological promise of the Enlightenment to liberate humankind from onerous labor through improvement of the natural world.[42]

Rubber goods also formed part of the mass marketed consumer commodities that contributed to and communicated Americans' sense of status as older values of discipline, self-restraint, and character-building surrendered to new ideals of pleasure, external appearance, and achievement through consumption.[43] Arming users with the capacity to maximize speed, prevent disease, ensure safety, repel filth, erase mistakes, demolish distance, transform landscapes, enhance leisure, conquer time, increase production, and control reproduction, manufactured rubber

goods encoded and articulated ideals of progress, efficiency, and power. This credo pervaded lavish public spectacles, flashy advertising campaigns, and everyday forms of consumption. At the World's Columbian Exposition in Chicago in 1893, for example, pneumatic conveyors promised to eliminate bottlenecks in the distribution of consumer goods. At the Indianapolis 500, spectators could behold the grueling strain on man and machine that challenged "the nerves and moral force of every racer" as well as the tires upon which "they tore through space." At the World's Fair in New York in 1939, the Firestone Company wowed millions with a demonstration of the latest innovations in tire-making. And in daily use, rubber goods reinforced the image of the machine as an extension of the body and the body as extension of the machine.[44]

Rubber goods were imbricated, moreover, in the "cultures of American imperialism"—the political struggles for power with other cultures and nations that have constituted both domestic social formations and international relations.[45] The late nineteenth-century spurt in urban and industrial growth accentuated U.S. perceptions of Latin Americans as "backward" and undisciplined.[46] In this vein, the myriad of technological innovations linked to the industrial application of rubber came to reconstitute what many Americans believed defined happiness and communicated success in their society and abroad. As Harvey Firestone Jr. asserted in a radio address in September 1931: "Today rubber enters into almost every phase and activity of life. Without it, no factory could run, no modern building could operate, no fast railroad train could travel across the country, and no steamship could sail the high seas. No home could be conducted in the modern sense without the articles and implements of rubber that are made for our daily use. From the first cry of the new-born babe until the last slow march to the grave, things made of rubber are indispensable to our modern life."[47]

Dependent America

The consumption of rubber in the United States, one author noted after the attack on Pearl Harbor, "had been built upon the quicksands of untrustworthy supply."[48] Since the most elastic latex issued from the *Hevea brasiliensis*—which required a tropical, humid climate with temperatures in the 70- to 90-degree range and a rainfall of about 100 inches a year—the commercial geography of rubber was confined to a comparatively narrow band extending ten degrees north and south of the equator in Asia, Africa, and Latin America (see map 2.1).[49] Hundreds of rubber-producing

Map 2.1 Principal Rubber Regions of the Amazon

trees, shrubs, plants, and vines did grow in the United States—the most promising being guayule, a shrub native to southern Texas—but the rubber content of the latex of tropical plants far exceeded that found in temperate regions, where labor expenses were also much higher.[50] Indeed, crude rubber reflected what Fernando Coronil has deemed the "global division of nature," which has secured regions of the so-called Third World a distinct role in the international division of labor.[51] At the time of Pearl Harbor, 98 percent of U.S. crude rubber imports came from Southeast Asia, principally British Malaya and the Dutch East Indies.[52]

Dependency on Asian rubber markets periodically touched a political nerve in the United States. Although complex markets tend to conceal from consumers the geographical regions and social relations that produce commodities, during the interwar period calls had surfaced for developing synthetics, conserving rubber stocks, and establishing supply sources outside the European colonial territories.[53] Following the disruption of overseas raw material provisions for leading industrial nations during World War I, the War Production Board had recommended government stockpiles for future emergencies.[54] And Secretary of Com-

merce Herbert Hoover, railing against "foreign cartels" before the House Committee on Interstate and Foreign Commerce in 1923, obtained a congressional appropriation of $500,000 for the Departments of Commerce and Agriculture to explore opportunities for rubber cultivation in the Western Hemisphere and the U.S.-controlled Philippines. Between 1925 and 1926, representatives from these government agencies traveled more than 20,000 miles on thirty-seven rivers in the Amazon seeking sites for potential rubber cultivation, and scoured regions of Central America as well. Large rubber companies also conducted independent surveys in the mid-1920s in tropical America.[55]

Indeed, throughout the 1920s and 1930s, military strategists and mineral specialists in the U.S. Bureau of Mines and the Geological Survey, anticipating the difficulty of quickly adapting the American economy to the use of expensive ersatz formulas, called on the government and private industry to devise a comprehensive plan for raw materials.[56] And prior to the Japanese offensive in Malaya, various U.S. politicians and policymakers had warned of the danger of such a strike. As economist Eliot Janeway wrote in 1939: "The American economy, and with it American defense, cannot be operated without rubber and tin, which at present cannot be obtained in adequate quantity except from the British and Dutch colonies in Southeastern Asia. And Japan today commands the trade route connecting the west coast of the United States with the Malaysian Straits. . . . Here, ready to hand for Japan, is a safer and more powerful weapon against the United States than the folly of naval attack." The following year, the U.S. Army and Navy Munitions Board reported: "there appears to be no question that rubber is almost as essential to national defense as powder [or] explosives . . . national defense would be jeopardized should the supply from foreign sources be cut off."[57]

Such self-styled victimhood was somewhat coy for a leading industrial and colonial power.[58] Still, rubber self-sufficiency did elude the United States. European restrictionist policies, designed to reverse downward trends in rubber prices, certainly exacerbated U.S. vulnerability as a "have-not" nation. Britain's Stevenson Plan (1922–28), which imposed compulsory production and export controls on rubber in its colonial territories, had collapsed only after the Dutch East Indies and other Asian producers expanded production, and the U.S. government instituted a program of stockpiling and rubber reclamation.[59] In 1934, however, producing countries burdened with large surpluses due to the Depression-era drop in automobile sales created the International Rubber Regulation

Committee (IRRC) to stabilize prices via designated production quotas. (Brazil, a minor producer, was outside the regulated area.[60]) The IRRC's restrictionist policies reduced world rubber stocks and remained in effect until the Japanese seizure of Malaya.[61] Protests to the committee by its consumer liaison, a representative of the U.S. Rubber Manufacturers Association, mattered little: IRRC officials could retort that U.S. manufacturers refused to commit to buying fixed amounts of future rubber production or to maintain any designated level of stocks. Deeming rubber stocks a matter of business rather than politics, the IRRC ordered the suspension of supplies to the Axis only following U.S. entry into the war.[62]

U.S. rubber manufacturers, in any event, had reached a certain accommodation with restrictionist policies.[63] They considered the rise in price levels induced by artificial scarcity as a lesser evil than price fluctuations, which restrictionism aimed to contain. Price increases of crude rubber were not unimportant to manufacturers, but the extra costs of the material could be passed on to the final consumer; price fluctuations, however, had cost rubber manufacturers millions of dollars in inventory write-downs, and negatively affected balance sheet value.[64] Indeed, American corporate hedging, political inaction, and consumer complacency contributed to the nation's wartime rubber crisis, and the headlong rush of U.S. officials into the Amazon.

Rubber Acquisition and the "Big Four"

Prior to Japan's seizure of the latex producing colonies of Southeast Asia, the vertical integration of the rubber producing and manufacturing sectors demanded a degree of U.S. government intervention and centralization that neither external nor internal conditions could sustain.[65] The fear of overexpansion and contraction haunted business leaders and government officials before Pearl Harbor. Roosevelt, hobbled by isolationist sentiment, domestic opposition, and personal indecision, moved haltingly to secure alternative sources and stocks of rubber (and other strategic raw materials). And the American public, reeling from economic depression and leery of renewed entanglement in Old World conflicts, failed to mobilize for alternatives. In its stead, public policy delegated the acquisition of strategic materials to private industry but lacked the power to compel American rubber manufacturers to invest in alternate sources or emergency stockpiles.[66]

By 1936, four tire manufacturers—U.S. Rubber, Goodrich, Goodyear, and Firestone—dominated the American rubber industry, controlling 75

percent of tire production. Located primarily in Akron, Ohio, the "Big Four" maintained chemical laboratories, research facilities, quality control, and internal information flow. It was here that processing took place in a marked global division of labor, as chemists, technicians, and factory workers vulcanized, compounded, reshaped, and colored rubber, determining the degree of softness, resilience, tensile strength, and tear-resistance for its specific purpose. By 1939, the rubber manufacturing industry employed more than 120,000 workers in the United States and produced goods valued at $900 million.[67]

Rubber manufacturers' earnings were heavily tied to the demands of the automotive industry as well as the fluctuating prices of the materials used. Between 1920 and 1935, the rubber industry had lagged as one of the most profitless divisions in Big Business, as a drastic drop in the price of crude rubber in the recession of 1920–21 wiped out inventory values, while the Great Depression choked demand for the next half decade.[68] The extreme fluctuations in price also made rubber a perfect mark for speculators, as U.S. rubber-goods manufacturers prior to World War II bought three-fourths of their requirements primarily from New York-based importers and dealers.[69]

Manufacturers' profits thus depended upon efficiency in industrial engineering and factory production, advertising and merchandising, overseas expansion, cartel agreements, and ruthless competition. With the consolidation of the Big Four, 35,000 independent tire dealers and 35 small tire manufacturers went under between 1926 and 1929.[70] Goodyear Tire and Rubber, on the other hand, expanded from a medium-sized firm in 1900 to a multinational giant with 46,194 employees in 1939 that had turned out over 250,000,000 tires and consumed nearly one-seventh of all crude rubber.[71]

Stockpiles and Synthetics

Although the IRRC maintained quotas on exports, American consumers also determined the size of rubber stocks. With proper care and storage facilities, crude rubber can be stocked for many years, offering a safeguard against military and civilian shortage.[72] The Interdepartmental Committee on Strategic Materials, composed of representatives from government departments both civilian and military, sought to alert the public to the importance of rubber inventories for national security, but with millions of Americans still facing poverty and unemployment and the nation not at war, Congress refused to authorize the acquisition of

rubber stocks, whose costs were estimated at hundreds of millions of dollars. Stockpiling by private industry proved no more successful. Opposing long-term plans that might result in large surpluses, higher rubber prices, and weakened profits, the Big Four balked at being pressured to take up the government's slack. In fact, privately owned rubber stocks in the United States shrank from a high of 355,000 long tons of rubber to 176,000 in 1940.[73]

Following the Nazi invasion of Holland and France, Congress authorized the Reconstruction Finance Corporation (RFC), a multibillion government agency founded in 1932 to speed economic recovery, to oversee a vast program of purchase of strategic materials. One of its subsidiaries, the Rubber Reserve Company [later renamed the Rubber Development Corporation], was entrusted in June 1940 with producing, acquiring, and dealing in rubber. But it too failed to amass government inventories. To be sure, the IRRC's restrictionist policy remained, while German militarization prodded Britain, the Soviet Union, and other foreign buyers to snap up crude rubber at prices that Rubber Reserve refused to pay, purportedly to avoid further hoarding and speculation.[74] Although a minor producer, Brazil bore witness to similar trends: Rubber Reserve had contracted in October 1941 to purchase the nation's exportable surplus of rubber for five years at a price of 30 cents a pound (about twice as high as formerly paid for Asian rubber), but rubber-poor Argentina outbid, speculators hoarded, and a prohibition on exports to countries outside the hemisphere was difficult to enforce.[75]

U.S. government stockpiles primarily lagged, however, because private industry retained preferential and unrestricted access to rubber purchases.[76] As consumer demand for automobiles skyrocketed in anticipation of a wartime disruption, Detroit turned out over a million more cars in 1941 than in 1939. Passenger car tire production reached fifty million, and the Goodyear Tire and Rubber Company's earnings jumped from $217,540,079 in 1940 to $330,599,674 in 1941.[77] During this period, however, the Reconstruction Finance Corporation spent only $3 million on raw resource development in Latin America from a budget of $500 million.[78] As RFC Chairman Jesse Jones asserted in his postwar memoirs: "We had no intention of competing with the rubber industry in buying crude rubber, but felt that it was necessary to have a working arrangement with them."[79] The centralization of rubber purchasing did go into effect in June 1941, ending competition between private American buyers and the government, but by this point Rubber Reserve had pur-

chased only slightly more than 10 percent of total exports during the previous year.[80] With raw rubber siphoned for nonessential civilian use, government stockpiles at the time of Pearl Harbor reached only 30 percent of the level deemed critical for national defense.[81]

The low-level production of synthetic rubber derived from a similar mix of government inaction, popular complacence, and the corporate bottom line. Since the nineteenth century, the chemical properties of rubber had been revealed as a polymer of isoprene (a butadiene derivative), a liquid hydrocarbon boiling at low temperatures, which can be obtained from rubber by distillation. Butadiene, the key ingredient of synthetic rubber, can be derived from petroleum, grain alcohol, or other raw materials, but it is a complex and expensive process. Indeed, growing military-industrial demand had prompted the governments of other rubber dependent nations, such as the Soviet Union and Germany, to spearhead the development of synthetics and achieve modest prewar output.[82] In the United States, all four major rubber companies, as well as Standard Oil and du Pont, had been involved in developing synthetic rubber but refused to pool their patents or exchange technical information prior to the war. Furthermore, as the Antitrust Division of the Justice Department would reveal, a cartel agreement between Standard Oil Company of New Jersey and Germany's IG Farbenindustrie delayed the development of synthetic rubber in the United States. Thus, at the time of Pearl Harbor, synthetic rubber comprised just 4 percent of the rubber consumed in the United States; of 200,000 tire stores in the United States in 1940, not one sold tires made of synthetic.[83] Only after Pearl Harbor did rubber companies sign an agreement with the Rubber Reserve Company placing at the disposal of the government agency all patent applications and know-how regarding synthetic rubber. Standard Oil pleaded guilty and paid a modest fine of $50,000, but no prosecutions ensued, nor did similar disclosures cost other guilty corporations war contracts.[84]

While revelations of corporate wrongdoing made for potent populist salvos, more mundane factors stymied the production of synthetic rubber as well. Synthetic cost three times as much as natural rubber, was inferior in resilience and tensile strength, and confronted widespread consumer skepticism.[85] Major rubber manufacturers and a number of government experts, therefore, insisted that without state-financed construction of plants and a guaranteed market, synthetic rubber stood little chance of succeeding.[86] As Assistant Secretary of War Louis Johnson urged in November 1938: "This constitutes a program of research

involving national defense and not normal competitive industrial relations."[87] But as late as September 1940, Roosevelt reportedly stated that "the wealthy rubber companies ought to build their own plants."[88]

Geographic Diversification: Corporate and Government Initiatives

Interwar efforts at geographic diversification likewise failed to reduce U.S. dependency on traditional rubber markets. Plantation development represented a costly and long-term undertaking. A forty-acre rubber plantation in the Amazon, for example, necessitated about 600 man-days to clear the underbrush, an additional 80 man-days to line and stake the plot, and 75 man-days to plant the trees.[89] Since rubber trees required at least five years to reach maturity, and premature collapse signaled total financial loss, U.S. companies eschewed developing plantations in unfamiliar areas.[90]

The Firestone Company's Liberian plantations marked the most successful attempt at geographic diversification prior to World War II. With Philippine land law barring corporate acquisition of large tracts in the U.S.-occupied territory, Firestone negotiated with the government of Liberia in 1926 a concession of one million acres for ninety-nine years in return for infrastructural development. The smallest of the Big Four, Firestone may have hoped to improve its competitive position by developing an alternative source of plantation rubber in Africa during the heyday of Britain's Stevenson Act. Still, Liberia accounted for less than 5 percent of international rubber output at the time of Pearl Harbor.[91]

Henry Ford's rubber plantations in the Brazilian Amazon signaled another major corporate effort at diversification. Seeking a direct supply for his company's automobile tires, Ford was heartened by U.S. government reports from the mid-1920s on the Amazon's potential for rubber plantations. The Companhia Ford Industrial do Brasil acquired a 2.5-million-acre concession (about 82 percent the size of Connecticut) on the Tapajós River in Pará in 1927, which the company named Fordlândia. When leaf blight and soil erosion snarled production at Fordlândia, Ford traded 703,750 acres in 1934 for land 30 miles upriver at Belterra. The Ford plantations boasted millions of rubber trees under cultivation, power plants, paved roads, sawmills, sanitary water, American-style architecture, and more than 1,000 buildings.[92]

While detractors slammed the Ford concession as an imperialist beachhead, his supporters in Brazil lauded the industrialist as a capitalist with a conscience who would bring social and economic progress to

the Amazon.[93] Workers and their families received social services such as housing, schooling, dental and medical care, pasteurized milk for babies, recreational facilities (including movies), and free burials. On-site concessionaries offered food and supplies at low prices, and the company encouraged workers to grow their own vegetable gardens. Workers earned a wage equivalent of 33 to 66 cents a day—at least twice the current wages paid elsewhere in the region, and higher than the wages of stevedores and factory workers in Belém—for a workday that began promptly at 6:30 and ended at 3:30, with one hour for lunch. Clocks installed on the premises regimented workers' schedule, and the company forbade alcohol consumption. On a 1938 visit to Belterra, Gastão Cruls gushed at the company's achievements: "there one sees the most clamorous rebuttal to those who still assume that it is impossible nowadays to achieve agricultural production in the Amazon . . . our caboclo is affixed for the first time to the land, and his hand, which once only knew how to forage and pillage, has grown accustomed to the act of planting."[94] Vargas heaped similar praise during his visit to the property in 1940.

Ford's experiment also proved a costly blunder. A 1942 report noted that although Ford had expended $9 million in the Amazon over the previous twelve years, commercial tapping was only expected to begin in Belterra the following season.[95] Historian Warren Dean has blamed Ford's woes on South American leaf blight, but the properties also faced a chronic labor shortage.[96] In 1941, for example, the combined labor force at the two estates had climbed to 2,723 from 1,700 three years earlier, but a producing plantation of 76,000 acres—the goal of the Ford concession—would require 11,000 tappers alone. Ford, like other bosses in the rural Amazon, contended with a workforce accustomed to the relative autonomy afforded by subsistence agriculture and the extraction of wild forest resources, and one that chafed at managerial demands for timesaving, regimentation, and temperance reform. The plantations' payroll dropped during the dry months, when wild rubber was extracted from the forest, and in response to demand for competing forest commodities.[97] Archibald Johnston, general manager of the Ford plantations, for example, bemoaned that when the price of cumaru (Brazilian teak) seeds soared in 1938, three hundred workers abandoned the premises.[98] In vain, Ford endeavored to import laborers from Portugal and northeastern Brazil, and reportedly from Puerto Rico as well.[99] As a student of the Amazonian rubber trade concluded: "Plantation rubber cultivation in Amazonia is not impossible—merely uneconomic."[100] The U.S. rub-

ber firms, largely unresponsive to political pressure to develop sources outside of Southeast Asia, long understood this.[101] Ford's debacle in the Amazon only confirmed their fears.

Following the Nazi onslaught on France and Holland in the spring of 1940, political support coalesced for increased government investment in the expansion of hemispheric rubber production. While Americans disputed the significance of war in the Pacific and Europe for their country, few questioned the expediency of securing access to Latin American raw materials to ensure economic stability and military preparedness, and to keep Axis influence in the hemisphere at bay. As author John Gunther consoled readers in *Inside Latin America* (1940): "Should the war spread to the Far East and cut off the United States from its normal sources of rubber, quinine, hemp, and tin, we can only pray that Latin America will be a substitute."[102] Or as another U.S. author queried Brazilian officials in 1940: "Rubber, long the major product of the Amazon, is indispensable in world industry today. With the war in Europe, with Japan's movements in the South Pacific and her consequent threats to cut off our trade with the Dutch East Indies and British Malaya, why should the United States not turn to your country as its chief source of rubber?"[103] In fact, between 1939 and 1941, a congeries of U.S. agencies, including the Reconstruction Finance Corporation, the Inter-American Development Commission, the Export-Import Bank, the Department of Agriculture, the Airport Development Program, the Office of Inter-American Affairs, the Economic Defense Board, and the War Department, aimed to complement or supersede the State Department in strengthening U.S. economic, political, and military interests in Brazil.[104]

In June 1940, Congress passed a bill that provided $500,000 to the Department of Agriculture for the commercial development of rubber production in the Western Hemisphere. The USDA's Bureau of Plant Industry and the Office of Foreign Agricultural Relations worked out a comprehensive program to conduct investigations, principally into the problem of leaf blight. Cooperative agreements were signed with fourteen Latin American countries as well as several commercial companies; and USDA plant scientists traveled to Latin America to survey the suitability for Hevea cultivation, health conditions, and wage rates. Experimental and demonstration sections were established in the Brazilian Amazon, Central America, and the Caribbean to gather and propagate high-yielding clones of Hevea and to breed disease-resistant strains; and scientists applied fungicidal sprays to control leaf blight on the millions of disease-

susceptible seedlings growing in experimental nurseries.[105] The agreement that Elmer Brandes, head pathologist of the Special Rubber Project of the Bureau of Plant Industry, signed with the Brazilian minister of agriculture in October 1940, for example, authorized the operation of a survey team in the Amazon and the establishment of an experimental nursery on the grounds of the Instituto Agronômico do Norte (IAN) under a mixed Brazilian-American commission. By 1942, more than a million seedlings were undergoing trials at IAN, and fifteen million throughout Latin America.[106]

The most prominent domestic supporter of hemispheric rubber development was Henry A. Wallace, who served as secretary of agriculture between 1933 and 1940, and vice president between 1940 and 1944. After July 1941, Wallace also chaired the Economic Defense Board, which coordinated the activities of the various agencies involved in the procurement and stockpiling of strategic materials, and in preclusive buying to block the Axis from obtaining essential war supplies. A plant geneticist and agricultural economist by training, Wallace had premised the success of the New Deal at home on policies that favored the scientific management of agriculture, maximum productivity and distribution, and the promotion of international trade and cooperation through low tariffs and enforcement of antitrust legislation.[107] In this vein, Wallace was a driving force behind the creation in 1940 of the Office of Foreign Agricultural Relations, which sought to boost agricultural training and complementary crop production in Latin America to strengthen hemispheric trade and defense.[108] Between 1930 and 1940, agriculture provided 80 percent of Latin American export revenues, but half of these crops competed against U.S. products, while American imports of tropical and semitropical goods from Latin America represented only $16 million of a total trade of $236 million. Rubber epitomized a Western Hemisphere tropical commodity underutilized by U.S. industry: in 1938, for example, the U.S. had spent $1 million on rubber imports from all of Latin America, in comparison to $119 million from Asia.[109]

With Brazil producing only 17,480 tons of rubber in 1940—compared to 1,392,604 tons in Asia—military analysts and business leaders dismissed the Amazon's capacity to meet short-term domestic needs in the event of a crisis.[110] U.S. advocates of the hemispheric trade, however, insisted that state-funded scientific research, disease-resistant Hevea trees, public health campaigns, and transportation improvements would allow the rubber trade to rebound in the Western Hemisphere.[111] They endorsed

U.S. government policies that made use of a system of quotas and preferential tariffs, technical assistance, and long-term contracts with foreign governments and industries to render Latin American rubber competitive with Asian exports.[112] And while conceding the decade-long lag and the billions of dollars in expenditures that would be needed for tropical America to meet U.S. rubber needs, they stressed its importance for national defense and inter-American stability. As the USDA's *Agriculture in the Americas* asserted: "The establishment of a successful [rubber] plantation industry in the Western Hemisphere, along with the encouragement of other complementary crops, will go a long way toward improving the economic, financial, and social levels in many of the countries. By taking advantage of the many resources in Latin America, we will be supplying the nations to the south of us with purchasing power needed to create a solid foundation for lasting trade relations."[113]

Indeed, for the America First Committee, founded in September 1940, Amazonian rubber, alongside other Western Hemisphere raw materials, would save the United States from apocalypse. Opposed to U.S. involvement in the war—whether Roosevelt's bids to provide Lend-Lease assistance, escort war supplies to Allied ports, or place economic pressures on Japan—America First focused heavily on inter-American trade as an alternative to intervention in Old World conflicts. At the time of the attack on Pearl Harbor, the organization contained approximately 250,000 members (dominated by Republican opponents of the New Deal, but spanning the political spectrum), yet through media campaigns and rallies, and the furnishing of research data to Congress, America First proved highly influential in sustaining an anti-interventionist stance in the United States.[114] For example, lambasting "alarmists" who claimed a Japanese attack on Southeast Asian strategic commodities would cripple the U.S. economy, the organization stated: "We need not go to war for rubber or tin; American boys need not fight and die in Dong Dang [*sic*] or Bangkok. The Western Hemisphere is self-sufficient in terms of raw materials."[115] Or as Senator Robert La Follette of Wisconsin thundered in a congressional speech of February 24, 1941: "If to our breath-taking resources we add the resources of a friendly Latin America, we emerge with rubber as our major deficiency—rubber which was first developed in the Western Hemisphere and may now be brought back to satisfy our needs. . . . With these fabulous resources, with the man power and machine power to convert them into goods to satisfy man's hunger for sustenance and significance, we can end the paradox of poverty in the midst of

plenty. We can hold aloft a beacon to light the free way of life for all mankind." Praising the USDA's exploratory rubber surveys in Latin America and the October 1941 agreement with Brazil which allowed the U.S. government to purchase its export surplus of rubber, America First boasted that "within 10 years, Brazilian production could be restored to its former pre-eminence."[116]

Dreams of tropical bounty within a Hemisphere of Peace, balms for anxious souls or isolationist convictions, were no substitute for concerted state policies; they may even have nurtured a false security that hindered alternative procurement channels for rubber, exacerbating U.S. unpreparedness at the time of Pearl Harbor. Yet government measures favoring a Western Hemispheric rubber trade also presented a bold reorientation in the global economy and U.S. foreign relations. As journalist Carleton Beals noted of the complicity of U.S. corporate and government policies in sustaining European colonial rubber monopolies: "If a price average for the past twenty-five years is struck, it will be found that it would have been cheaper to pay more for Brazilian rubber, that we could even have spent billions to finance a whole rubber industry in South America and also a synthetic industry and, as a nation, still have money in our pocket."[117] Indeed, the mere $500,000 earmarked by Congress in June 1940 for rubber field surveys and the establishment of experimental stations in Brazil and other Western Hemisphere nations—half of the requested funds—reflected the relative weakness of this alternative position in business and political circles.

Dawn over the Amazon: Envisioning Nature and Politics

If global warfare rekindled U.S. interest in the Amazon, contested visions of the tropical forest fractured public opinion. Since meaning is produced within existing symbolic contexts and prior conceptions of place, most Americans prior to Pearl Harbor probably imagined the Amazon as a site of degeneration. U.S. imperial ideologies in the Caribbean and the Pacific long cast tropical peoples as incapable of self-government, an image amply marketed by the media and culture industries.[118] In *Let's See South America* (1939), for example, Anna Witherspoon marveled at the tropical forests' "great variety and abundance of the plant and animal life," but railed that the hot climate and luxuriant landscape led "light-hearted and irresponsible" workers to labor "just enough to provide the necessities of existence."[119] Of his trek through the tropical forests of South America, William La Varre, a fellow of the Royal Geographical Society and the

American Geographical Society, noted in 1940: "The jungle is a friend to no one. Some men go crazy in the jungle—crazy with the gloom, crazy with the heat, crazy with forty days of rain, crazy with themselves."[120] And Harold Noice's 1939 account of his rip-roaring Amazon adventure began with the tantalizing hook: "Have you ever heard of rivers that run black as ink through the depths of the Brazilian jungle? Of man-eating fish the size of ordinary trout? Of savages who mix dead men's bones with their beer? You have, have you? Well, so have I, and I've seen them too."[121]

Other U.S. observers, however, drew inspiration from homespun myths of the regenerative power of frontier conquest. In *Journey to Manaos* (1938), for example, geographer Earl Parker Hanson gushed:

> The average man can hardly realize how widespread is the idea, even in the United States, that the settling of South America would give another breathing spell to our civilized world. But, being interested, I find myself confronted at every turn by the romantic argument that the conquest of South America's wilderness would do for the Western Hemisphere what the conquest of the West did for the United States at a critical time. . . . colonization of South America's interior would give a miraculous boost toward prosperity and the consequent release of our pent-up spirits.[122]

Likewise, Carleton Beals's vision of Amazonian modernization—replete with "great air-cooled cities [arising] on the banks of the Amazon and its tributaries," the construction of canals and locks on rivers and expansion of air travel, and the cultivation of disease-resistant, high-yield rubber strains on small holdings—evoked moral rebirth in the Americas.[123] In "The Future of the Amazon" (1941), he affirmed: "Certainly until man has made a determined and scientific assault upon this region, the New World will not have realized its full potentialities; South America cannot be said to have reached maturity or to have found its true place as one of the great active continents of the earth. Here is one of man's last great physical frontiers. To tame that great wilderness will require the most extensive application of political and economic knowledge, the latest instruments of science and the noblest aims of human betterment." The forest's rich natural resources would unlock "fresh secrets for man's mastery of earth" and heighten "material and spiritual enjoyment therein."[124] In this vein, Beals's novel *Dawn over the Amazon* (1943) featured an intrepid U.S. engineer holed up in a fort in the Brazilian forest with a group of Latin Americans, defending the South American heartland

from a simultaneous German and Japanese invasion.[125] The notion of the Amazon as patrimony of "mankind" rather than the sovereign territory of South American nations has a long history, as does the image of the heroic North American protecting the forest.

Henry Wallace's support for hemispheric rubber development likewise traded on the spiritual allure of Latin America. As historian Frederick Pike notes, for a number of U.S. intellectuals and political leaders who viewed the Great War and the Depression as punishment for their compatriots' greed, Latin America came to represent wholesome, communal cultures that offered inspiration for national renewal.[126] Indeed, as Wallace wrote in 1939: "We are challenged to build here in this hemisphere a new culture which is neither Latin American nor North American but genuinely inter-American. Undoubtedly it is possible to build an inter-American consciousness and an inter-American culture which will transcend both its Anglo-Saxon and its Iberian origins."[127] Contending that all cultures of the Western Hemisphere shared "an American belief in a democratic progressive future," Wallace preached that science, capital, and management, under the firm direction of progressive governments, could help to create a cooperative hemispheric community.[128] Although by spring 1941 Wallace had shifted back to a firmer internationalist position after Roosevelt committed the nation to Lend-Lease, the vice president retained a special interest in the economic development, democratic consolidation, and cultural mores of Latin America.[129]

Given the centrality of the frontier in the United States in the formulation of national myths and imperial visions, perhaps more intriguing than application of a well-worn cultural gloss to the Amazon were the varied meanings that observers imparted.[130] Over the course of the late 1930s and early 1940s, Americans staked the Amazon as arsenal, laboratory, shrine, and inferno. For idealists, the remaking of the Amazonian landscape not only promised new directions for inter-American trade and the U.S. industrial economy, but moral regeneration through mastery of nature and cross-cultural fertilization.[131] For seekers of El Dorado, the use value of the forest lay in "the wealth and money-acquiring opportunities in the great valley of the Amazon for those willing to make the sacrifice imposed by a tropical climate and living difficulties."[132] For isolationists, the forest's raw materials would stave off catastrophe. And for skeptics, the Amazon lurked as an ominous jungle.

Accords and Discord in Washington

In the wake of the Japanese invasion of Malaya, the U.S. government scrambled to find alternative sources for rubber. As noted, the Rubber Survey Committee prioritized the creation of a domestic synthetic industry. Yet crude rubber acquisition remained paramount due to its irreplaceability for certain industrial applications and the lag in the construction and operation of synthetic plants. In the Amazon, U.S. policymakers favored the expansion of wild production through improved tapping techniques and clearing of forest trails, rather than longer-term plantation development. The Office of the Coordinator of Inter-American Affairs (OIAA), a government agency headed by Nelson Rockefeller and staffed by representatives from the private commercial sector, dispatched seven of its agricultural technicians to the Brazilian Amazon in February 1942 to gather information on the production and commercialization of wild rubber.[133] Consonant with the OIAA's goal of strengthening U.S. political and economic influence in Latin America, Rockefeller vowed to offer long-term technical assistance to the Brazilian government in its efforts to develop the Amazon basin and to produce "commodities vital to a rounded hemisphere economy and because of the increased purchasing power which would be created."[134]

On January 28, 1942, Vargas severed diplomatic ties with the Axis. The U.S. Joint Army-Navy Board shelved its "Basic Plan for the Occupation of Northeastern Brazil" (code-named "Plan Rubber"), a proposed American invasion of Natal, with subsequent landings at Salvador, Belém, and Fernando de Noronha, that had been devised after Pearl Harbor to seize control of the strategic western hemispheric side of the South Atlantic.[135] In March 1942, the United States signed a series of agreements with Brazil that represented the most comprehensive military and economic assistance program heretofore attempted in Latin America. The so-called Washington Accords provided for a $100 million loan to Brazil to undertake production of strategic materials; a $14 million loan for development of Itabira iron deposits and the Vitória-Minas railroad; a $5 million fund to improve the production of raw rubber in the Amazon; and a similar amount to finance a health and sanitation program in the rubber-producing areas (see figure 2.1). The agreements also called for the eventual delivery of $200 million worth of military equipment.[136] After a spate of Nazi attacks on Brazilian merchant marine and passenger ships that claimed the lives of thousands of civilians, Vargas declared war on Ger-

many and Italy on August 22, 1942 (see figure 2.2). Brazil would become the only Latin American country to send air and ground troops to Europe, dispatching 25,000 members of its armed forces to southern Italy to fight alongside the Allies in July 1944.[137]

To increase Amazon rubber exports, the U.S. government negotiated fixed rubber prices to avert sudden price fluctuations, offered expanded credit to reduce operating costs, and secured Brazilian consumption quotas.[138] Under the Washington Accords, Brazil set its annual internal consumption of raw rubber at 10,000 tons, and agreed to sell the United States its exportable surplus of crude rubber for a fixed price until December 31, 1946. The initial price of 39 cents per pound for the highest grade of rubber (washed and dried *Acre fina*), applied to purchases for consumption within Brazil as well as sales to the United States, was adjusted in May 1942 to 45 cents per pound to reflect the rise in the cost of living—the equivalent of $4.70 per pound in terms of prices in 2002.[139] In February 1944, the United States applied a price premium of 33.3 percent to Brazil to offset increased production costs, making the effective price 60 cents per pound for higher grade rubber. The United States also agreed to pay a premium for rubber produced over certain tonnages toward a fund to develop rubber plantations in the Amazon, and committed to buy all of Brazil's surplus manufactured rubber. The Rubber Reserve Company (Rubber Development Corporation) served as the purchasing agency of the U.S. government. In Brazil, the Banco de Crédito da Borracha, a government bank created in July 1942 with funding from the Brazilian and U.S. governments (60 and 40 percent, respectively), and led by a board of directors of four Brazilians and two Americans, acted as the sole purchaser of rubber. The bank also provided credit to the operators of rubber properties for purchase of supplies, clearing of forest trails, and cultivation of selected rubber trees.[140]

Bilateral agreements also aimed to improve health conditions and to increase and supply the labor force in the Amazon. A July 1942 accord between the OIAA's Institute of Inter-American Affairs and Brazil's Ministry of Education and Health created the Serviço Especial de Saúde Pública (SESP), with initial funding of $2 million and $250,000 from each agency, respectively.[141] Staffed by Brazilian and U.S. health care professionals, SESP focused on malaria control and medical assistance to tappers; the construction of hospitals in Amazonian cities and medical posts in smaller towns; the training of doctors, sanitation engineers, and nurses; and sanitation and nutrition campaigns.[142] A September 1942 ac-

Figure 2.1 Parade in Belém on Brazilian Independence Day in 1943 celebrating the Brazilian-U.S. wartime alliance. The top banner reads: "Viva Brazil! The Americas United, United Will Triumph, Whatever the Cost." *Source*: National Archives.

Figure 2.2 Hitler hanged in effigy in Manaus in 1943. *Source*: National Archives.

cord between the OIAA and the Brazilian Ministry of Agriculture established the Brazilian-American Food Supply Division, whose binational board sought to improve crop production and nutritional standards in the Amazon and northeast in light of the restricted food supplies caused by disruptions in coastal shipping.[143]

Under a December 22, 1942, accord between the Rubber Development Corporation (RDC) and the Serviço Especial de Mobilização dos Trabalhadores para Amazônia (SEMTA), the Brazilian government agency pledged to relocate 50,000 male laborers to the Amazon by May 1943. The RDC subsidized the operation at a cost of $100 per man accepted at Belém, or a total liability of $5 million. The RDC also agreed to provide funding to the Superintendência de Abastecimento do Vale Amazônico (SAVA), the wartime agency entrusted with assisting and supplying migrant-tappers in the Amazon. An April 1943 agreement between the RDC and SAVA committed the former to warehouse and sell foodstuffs and tapping supplies at discounted and fixed prices, purchasable only in cash, in the larger cities and upriver towns of the Amazon. Valid through December 1944 (with an option for renewal), the agreement with SAVA set a maximum profit margin of 15 percent on the resale of RDC goods to tappers, and courted local merchants by offering better-priced merchandise than established Amazonian firms.[144] Under the wartime accords, the Brazilian government retained full jurisdiction for enforcing labor legislation and price controls in the Amazon, while U.S. agencies were restricted to monitoring conditions and providing technical help for the migration project and on the rubber properties.

The efficacy of wartime agencies in transforming socioenvironmental conditions in the Amazon is examined over the course of subsequent chapters. For now, we might underscore that the accords reflected tensions between shorter-term goals for rubber extraction that focused on labor and production and long-term development objectives promoting health and sanitation, agricultural colonization, and public financing. This friction can be said to mirror competing policy objectives of U.S. and Brazilian officials respectively in the Amazon, but parsing such division along national lines also conceals considerable cross-national like-mindedness as well as significant internal divisions.[145] Indeed, Brazilian government representatives spoke of deep schisms among U.S. policymakers (and vice versa). Visiting the United States in 1942, João Alberto Lins de Barros, Vargas's wartime coordinator of economic mobilization, noted that the government agencies responsible for formulating policy

toward Brazil were like "hermetic compartments, each one struggling to assert its supremacy."[146] In fact, such "struggles" among U.S. policymakers emanated, in part, from deep conflicts between liberals and conservatives over acquisition procedures for raw materials. If both sides cast the debate over procurement policies in the Brazilian Amazon as a matter of U.S. national security—out of sincere conviction as well as to secure congressional funding and popular support—they also drew upon and disseminated competing images of the forest.[147]

Save the Amazon: The Board of Economic Warfare's New Deal for the Forest

Political wrangling over rubber procurement in the Amazon issued, most narrowly, from a jurisdictional overlap between agencies of the U.S. government. Since 1940, the Reconstruction Finance Corporation (RFC) had been authorized to create and fund subsidiary corporations for advancing national defense, such as the Rubber Reserve Company. After the Japanese invasion of Malaya, the press blamed the RFC's cost-conscious, business-oriented approach for contributing to the rubber crisis by understocking. Indeed, four months after the attack on Pearl Harbor, Rubber Reserve still had only one representative in Brazil.[148] Thus, under Executive Order 9128 of April 13, 1942, Roosevelt vested in the Board of Economic Warfare (formerly the Economic Defense Board), chaired by Vice President Wallace, complete control for directing the production and procurement of all raw materials from abroad. Rubber Reserve therein lacked the power to delegate authority, delimit the responsibilities of its field representatives, and earmark the usage of development funds without a directive from the Board of Economic Warfare (BEW). In theory, Rubber Reserve served as the administrative agency of the government to carry out the plans formulated by the BEW.[149] In practice, as the banker of the BEW, the RFC retained the power of the purse strings, since Roosevelt denied Wallace's requests for independent funds to purchase strategic supplies. Through delays and parsimony, RFC chairman Jesse Jones limited the actions and scope of the board's procurement program, all the while denying access to Rubber Reserve files.[150] As BEW director Milo Perkins later asserted: "We fought the 'foot-dragging' tactics of Rubber Reserve Company every hour of every day and every week of every month. It caused personal tensions but it got rubber development work started that was not being pushed aggressively prior to April 13, 1942."[151] The turf war would last until February 1943.

But the bureaucratic overlap, in fact, also reflected Roosevelt's style of governance, which aimed at maintaining the uneasy alliance between northern liberals and southern conservatives that formed his power base in the Democratic Party.[152] Jones and Wallace, both longstanding members of Roosevelt's administration, in many ways represented its ideological poles. Jones, a Houston mogul who had amassed a fortune in lumber, real estate, construction, banking, and media ownership, defended low commodity prices, fiscal conservatism, and business interests in the Amazon and elsewhere in Latin America. Like other conservatives, Jones called for waging economic warfare through private business firms and limited government involvement.[153] Wallace, on the other hand, endorsed higher wages and commodity prices, social policies for Latin American producers of raw materials, long-term loans to "industrially backward nations," and the elevation of regional living standards. Like other liberals, Wallace feared that corporate influence in the wartime economy would undermine social welfare programs in the United States and future postwar prospects for international cooperation and popular empowerment. To appease conservative Democrats for placing Wallace on the vice presidential ticket, Roosevelt had appointed Jones in 1940 to serve as secretary of commerce. But if Roosevelt would not use the war for the purpose of reform and long-term planning, he continued to approve of Wallace's self-assumed role as an adventurous spokesman to test the responses of national and international audiences to bolder proposals that he could not risk as president.[154]

Wartime rubber policy became a battleground for the vice president's endeavors to promote long-term economic stability and social justice in both the United States and Latin America. For Wallace, "wise rubber statesmanship" aimed for low cost to motorists, certainty of supply, and promotion of peace and security through friendly ties with nations in the Western Hemisphere. Just as the vice president had denounced international cartels that throttled competition and fostered global conflict, he now admonished that government-constructed war plants and raw material procurement would benefit monopolists rather than small businesses. "It is evident that the oil people, interested in building up an industry which will be profitable to them," Wallace wrote of the emergent synthetic rubber industry and its reliance on petroleum-based butadiene, "sacrificed the national welfare to their own cupidity or ignorance." And since Brazil and other Latin American countries were forging ahead with natural rubber production (which Wallace mistakenly believed would

soon achieve efficient production due to bud-grafting experiments and use of high-yielding strains of Hevea), he worried that a tariff wall would force U.S. consumers to pay higher costs for synthetics, and deal "a severe blow to these countries and their faith in our friendship."[155] Still, recognizing that the main supply of new rubber during the war would be synthetic, Wallace endorsed government controls to combat price-fixing and to ensure greater flexibility in accommodating the economic and political concerns of Latin American producers, which he believed private industry would disregard.[156]

In this vein, the corporate pedigree of officials in the Reconstruction Finance Corporation and Rubber Development rankled BEW functionaries.[157] The long list of suspects included J. W. Brickell, executive vice president of Rubber Development, who had overseen the Asian operations of the United States Rubber Company; R. B. Bogardus, vice president of the RDC, who hailed from the Goodyear Tire and Rubber Company; William Clayton, the assistant secretary of commerce and director of the foreign purchase program of the RFC, who ran the cotton brokerage firm of Anderson-Clayton with extensive holdings in Brazil; Maurice McAshan, the chief representative of the RFC and vice president of Rubber in Brazil, and Clayton's son-in-law; and Douglas Allen, president of the RDC, whose opposition to higher prices for Brazilian rubber producers, critics charged, stemmed from his own firm's marketing of tropical forest products in the Peruvian Amazon, including rubber allegedly smuggled from Brazil into Peru and Bolivia, where it fetched higher prices. As Paul Hays, chief of the development branch of the BEW's rubber division, noted upon his return from the Amazon in August 1942: "There is no reason to believe that because a man has been successful as a subordinate official of an American concern handling a venture of limited commercial scope, he is going to be able to organize the tremendous problems of supply, labor, transportation and production in the Amazon. The emphasis on commercial experience, like the emphasis on Brazilian experience, is limiting the supply of personnel and producing highly disappointing jobs."[158] Board officials also denounced Rubber's operations in the Amazon for favoring private (Brazilian) firms, restricting U.S. involvement, and deferring in commercial matters to the Brazilian government, notwithstanding its inability to ensure the social welfare of tappers.[159]

The BEW officials acknowledged the "tremendous administrative job" to acquire wild rubber in the Amazon, given the region's labor shortage, unhealthy conditions, inadequate supplies, and poor transportation.

Yet perhaps for this very reason they deemed the Amazon undertaking, with a proposed $200 million annual volume of trade, one of the board's "most significant projects."[160] The board called for higher rubber prices and working wages and improved health care for tappers. It demanded a more active role for the U.S. government in supplying goods and foodstuffs and enforcing protective measures for forest laborers.[161] And it pushed for increased aviation and marine units for the Amazon, in line with Wallace's advocacy of a global version of the early New Deal with vast public works projects modeled on the Tennessee Valley Authority and programs to build international highways and airways.[162]

In the BEW's vision, U.S. financial and technical support would modernize and moralize Amazonian society, freeing a local market long held hostage by monopolies, both domestic and international. Neither national character nor tropical miasma foreclosed development of rubber production in the Amazon, but rather the exploitation of tappers by bosses, who were themselves disadvantaged by a corporate-dominated global trade. But Wallace had also invented a new salvific role for the Amazon: its rubber would rescue U.S. citizens from the monopolistic clutches of industrial capitalism and the specter of future global conflict. Thus, in a rejoinder to Jones, who scoffed at the suggestion that plantation rubber in Latin America might one day be produced for as low as ten cents a pound, the vice president shot back: "I told him that if we expected to sell anything to the rest of the world after the war, we would have to figure out what we could accept from the rest of the world, and rubber was one of those things."[163]

The vision of a New Deal for the "common man" in the Amazon found its popular seer in Charles Wilson's *Trees and Test Tubes* (1943). In his global history of the rubber industry, Wilson bemoaned that while tire workers in Ohio earned good wages, "their employment had long been desperately imperiled by the serfdom, peonage, and bitter poverty of the hundreds of thousands of unknown, dark-skinned workers on the other side of the earth—those other men of rubber whose sweat, toil, and suffering have made possible most of the indispensable motion of American life and trade, as well as the existence of tires and the tireworker of Akron." Championing the right of tappers to wages compatible with those earned by the manufacturers of rubber goods, Wilson argued that support for small-scale rubber producers would distinguish U.S. foreign policy from exploitative European colonial practices: "Western Hemi-

sphere rubber lands can be and will be lands of free men and private ownership; the growing of rubber can and will merge into a new and better order of hemisphere agriculture and trade—an order free of the anarchies of international cartels and other devices begotten from the exorbitant profit of a self-chosen and usually absent few at the price of the economic and political subjugation of multitudes of tropical peoples."[164]

Liberals' wartime vision for the Amazon reflected an agenda aimed at restraining corporate capitalism and uplifting the poor worldwide. To be sure, the global New Deal envisioned by Wallace sought to buttress American private enterprise, not to bury it. As Wallace affirmed: "American capital can play a great constructive role—and a profitable role—in the development of the economies of other countries. It will provide us with enormous postwar foreign markets. For our greatest markets are in prosperous, industrialized countries."[165] His endorsement of U.S. government aid for developing nations heralded the postwar mandate of the U.S. Agency for International Development, while his defense of workers' rights in the Amazon resonates in the contemporary struggles of human rights and labor activists. Reflecting a mix of Christian idealism and Woodrow Wilson's internationalism, Wallace envisioned a future in which peace and abundance would grace all peoples.[166]

Like Woodrow Wilson, however, Wallace endeavored to remake foreign nations in a (progressive) U.S. mold. Similar accusations have been leveled at Nelson Rockefeller—Wallace's key foreign policy ally (and tennis partner)—for promoting the Americanization of Latin American societies through public health programs, agricultural modernization, market growth without the redistribution of wealth, and expanded opportunities for U.S. business.[167] Indeed, while the BEW assumed responsibility for U.S. development activities in wartime Latin America, including overseas technical missions to stimulate the provision and acquisition of foreign materials, the OIAA oversaw programs focused on medical services, sanitation reforms, and agricultural production.[168]

American officials' modernization project for the Amazon conformed as well to a certain imperial vision that has viewed colonies as laboratories for social engineering by scientists, medical personnel, technicians, missionaries, and educators.[169] In the context of Amazonian history, the BEW program perpetuated a time-honored tradition of outsiders to view the region as a tabula rasa. New Deal internationalists not only underestimated the capacity of the Amazon trade to resist restructuring accord-

ing to market principles and state regulation, but the opposition of U.S. conservatives to public policies that challenged their vested interests and core beliefs.[170]

The Rubber Development Corporation and the Amazonian Heart of Darkness

Averse to increased regulation of the domestic economy even in wartime, conservatives assailed liberal proposals for government assistance to uplift the poor worldwide.[171] W. P. Witherow, president of the National Association of Manufacturers, grumbled that he was "not fighting for a quart of milk for every Hottentot, or for a TVA on the Danube, or for governmental handouts for free Utopia."[172] The *Chicago Tribune* chided that "the mystic Mr. Wallace" was "engaged in dreams which should invite more skepticism than admiration." And Martin Dies, a Texan Democratic congressman who chaired the Un-American Activities Committee, alleged that a number of top officials in the BEW were affiliated with the Communist Party.[173] But one of Wallace's staunchest opponents was Jesse Jones.

In his postwar memoirs, Jones claimed that the procurement policies of RFC subsidiaries, working closely with foreign and multinational capital, had spared taxpayer money and the rubber program from national scandal.[174] Unlike proponents of "big government" at the BEW with their projects to "Americanize the Amazon," Rubber Reserve argued that limiting U.S. personnel and technical assistance in the Amazon would avoid "unnecessary interference with the habits and customs of the people," including social reform, "except in so far as such reforms had a direct bearing on productivity of labor."[175] Whereas liberals argued that the inclusion of social welfare policies in foreign procurement dealings would incentivize worker productivity, conservatives lambasted the use of U.S. political and economic influence to improve social conditions abroad as a government handout and a sure-fire bet to antagonize bosses and radicalize labor.[176] And while liberals charged that low rubber prices would deter tappers from producing latex, conservatives contended that high prices would prompt loafing.[177] In any event, argued Rubber Development president Douglas Allen, direct American action might succeed in a controllable operation, such as a mine, factory, or plantation, but relations of production in the forest would resist fundamental overhaul by U.S. officials.[178] Moreover, given Brazil's geopolitical anxieties regarding the Amazon, Rubber Reserve and the Department of Commerce condemned positions that might arouse suspicions regarding an "American

invasion, such as suggestions to turn over to U.S. officials the handling of immigration and transportation problems in the Amazon."[179]

Efforts to transform the Amazonian raw rubber trade through the elimination of middlemen and institution of wage labor during the turn-of-the-century boom had indeed foundered on the shoals of socioenvironmental conditions.[180] Yet wartime conservatives' pleas for cultural relativism in the Amazon, stemming from probusiness bent and Brazilian diplomatic pressure rather than anthropological sensitivity, skirted the fundamental question of U.S. government commitment to fair labor standards in Latin America.[181] Conservatives' deference to Brazilian sovereignty in matters of social policy was self-serving given their disparagement of the "fiction of the truly Brazilian character" of ad hoc agencies cobbled together to meet the exigencies of diplomatic accords.[182] It was also rather selective given the substantial wartime infusion of U.S. capital and government personnel into the Amazon region. Nor did critics of "big government" in the Amazon object to U.S. corporations reaping future windfalls from a synthetic rubber industry subsidized by hundreds of millions of dollars of public monies.[183] Conservatives' position toward the Amazon foreshadowed postwar U.S. foreign policy prescriptions for Latin American nations, promoting free market principles to stimulate economic development rather than commodity agreements and government subsidies.[184]

The repudiation of New Deal internationalism in the Amazon reflected as well deep-seated cynicism regarding the prospect of ameliorating forest workers' living standards. In his memoirs, Jesse Jones pilloried Henry Wallace and his "social-reformer colleagues" for their belief that improved living conditions in the Amazon would have led to increased rubber production. Mocking Wallace's alleged suggestion that providing 350,000 tons of staple foodstuffs to the Amazonian rural poor (including flour fortified with vitamins) would have ensured greater tapper productivity, Jones retorted: "The people down there, like most people all over the world, work only because they want to eat. If they were fed free, many of them would do no work at all and, therefore, there would be little or no rubber." Jones also (falsely) charged that the BEW's support for fair labor clauses would have compelled Latin American producers to pay wages with sufficient purchasing power to equal the North American scale, and to supply "'social' benefits" that violated the sovereignty of foreign nations and interfered "with the eating, housing, hygienic and working habits of their peoples." To make his point, Jones chose what he

probably believed to be Wallace's most ludicrous proposal: the notion that "it would make for a happier world to teach the Indians in the jungles of the Amazon to grow vegetables in the North American manner" when in fact they were accustomed "in their innocent content with a cornmeal and frijole [*sic*] diet."[185] Aside from a poor understanding of Amazonian society—citing cornmeal and beans rather than manioc as dietary staples of populations that were overwhelmingly non-Indian—Jones rehashed the image of the tropical forest as a site of decadence. In blaming tappers for their plight, rather than the exploitative socioeconomic conditions of a region disadvantaged within the broader global division of labor, Jones articulated a cynical (and cyclical) view of rural Amazonians as deadbeats whose marginality was both inevitable and merited.

As David Harvey notes, "The denigration of others' places provides a way to assert the viability and incipient power of one's own."[186] Indeed, a number of scholars have noted that "tropicality" has served as a foil for purported European and North American essences of industriousness and rationality.[187] Notwithstanding significant U.S. intervention in Amazonia during wartime, conservatives perpetuated the idea of a distant and different place whose populations were deficient and impervious to change.

The showdown between Wallace and Jones (and their respective constituencies) will be discussed in chapter 5, which examines struggles over public policies and narratives in the wartime Amazon. For now, we might conclude that although both Jones and Wallace were internationalist in seeking to spread American ideals—endorsing free trade and an integrated international system—their visions of the Amazon (and the Americas) differed significantly. Whereas Wallace aimed to efface the legacy of past injustice in Amazonia under the promise of future liberation, Jones sneered at efforts to accord the region such historical significance. Whereas Wallace's paternalism stressed Amazonian redemption through U.S.-led reform, Jones deemed the native population as refractory to uplift. If capitalism tends toward both equalization and differentiation in the production of nature and geographic space, Wallace and Jones embodied its Janus-faced profile.[188]

In his radio speech of June 12, 1942, Franklin Delano Roosevelt delivered an urgent message. "I want to talk to you about rubber, about rub-

ber and the war, about rubber and the American people," the president solemnly pronounced. With an anxious nation at war, Roosevelt broke the bad news that the United States had lost over 90 percent of its rubber supply—a material essential to "build the planes to bomb Tokyo and Berlin" and to "build the tanks to crush the enemy wherever we may find him." Launching an intensive two-week coast-to-coast collection drive, Roosevelt enjoined citizens to turn in old rubber articles at the nation's gas stations. The petroleum industry offered donors a penny a pound for the scrap rubber, which was transported to central collection points, sold to Rubber Reserve, and reprocessed to meet military and civilian needs. Although far from the battlefields of Europe, North Africa, and the Pacific, the war had literally come home as Roosevelt urged Americans to comb their cellars, barns, stock rooms, garages, and attics in search of rubber, and to conserve tires by driving more slowly and limiting car usage. "This *is* serious," the president noted of the rubber emergency, "I know the nation will respond."[189]

The nation did respond. Ten-year-old Sheila McAuliffe from Los Angeles sent her donation directly to the president: a piece of raw rubber that her father had obtained for her two years earlier from the Firestone Company when she was learning about Brazil in school. "I am now sending it to you because our country needs it and I'll get another sample when we've won the war," she wrote.[190] In the Los Angeles Coliseum, 80,000 people gathered for a rubber rally, where "an inspired matron" publicly removed her girdle and tossed it on the scrap pile. Actresses gave up rubber bathing suits, children donated their toys, and Falla, Roosevelt's dog, surrendered his rubber bones.[191] Roosevelt ultimately ordered a ten-day extension of the campaign, netting approximately 450,000 tons of scrap rubber—almost seven pounds of rubber for each man, woman, and child.

The scrap rubber campaign encapsulated a number of wartime trends in the United States: the rationing or recycling of goods; individual sacrifice on behalf of the national interest; and the importance of the federal government, in tandem with big business, in spearheading industrial production and the distribution of consumer goods. But the undertaking also reflected another aspect of wartime conversion: the failure of the United States to diversify rubber sources to lessen overreliance on Southeast Asian supplies. Recycled rubber, lacking adequate elasticity, served primarily in the production of lower-grade automobile tires and recap-

ping of existing tires. It was inappropriate for usage in heavy vehicles and aircraft and could not address long-term needs.

Interwar patterns of rubber acquisition and application in the United States are also critical for understanding the government's involvement in the Brazilian Amazon during World War II. As we have examined, although the United States was a "have not" nation when it came to rubber, the failure to diversify sources of natural latex, increase government stockpiles, and develop synthetics left the country deeply vulnerable to Japanese disruption of traditional supplies. While wartime policymakers prioritized the creation of a synthetic industry, the prospective shortage of rubber for military and civilian needs also propelled U.S. officials to the Amazon, and the forest to the American political landscape. If nations of the Northern Hemisphere have endeavored to secure or substitute tropical resources, their projects for the Amazon have shifted according to fluctuating consumer demands.[192]

War-era views of the Amazon in the United States also drew upon an assortment of myths regarding tropical and temperate America. Tropical landscapes long inspired visions of paradise or perdition, while the gendered romance of the western frontier conjured promises of economic opportunities and moral regeneration. Yet amidst the crisis of industrial capitalism, the advent of the welfare state, and global warfare, images of El Dorado or Green Hell acquired new messengers and meanings. New Dealers favored state regulation and subsidies to modernize the raw rubber trade, achieve enduring social reform, and offset monopolistic control by the emerging synthetic industry. Conservatives defended business prerogatives in the Amazon, corporate concentration in the United States, and the maintenance of the international division of labor. Indeed, if we view the ideal of the Western Hemisphere as a geographic concept rooted in nineteenth-century anticolonial movements that has sparked varied socioeconomic, cultural, spiritual, and geopolitical visions, the Amazon embodied its extremes for prominent U.S. wartime observers.[193] For Jesse Jones, the alterity of the forest epitomized and perpetuated vast, unbridgeable divides between North and South America. For Henry Wallace, the complementarity of Amazonian nature promised a shared future of peace, prosperity, and social justice.

Analysis of the circulation and application of rubber in the interwar and wartime United States reveals a host of human and nonhuman mediators—rubber manufacturers, automakers, and automobile tires; chemists, botanists, and industrial workers; bureaucrats, journalists,

and social reformers; advertisers, consumers, and drivers—that have imparted uses and meanings to nature and politics in the Amazon. Indeed, a transnational focus not only underscores the fundamental linkages between commodity producers and consumers, and the uneven impact of natural resource dependence, but frictions between geographic outsiders and locals in fashioning the Amazon.

CHAPTER 3

RUBBER'S "SOLDIERS"

Reinventing the Amazonian Worker

Distressed properties, overgrown forest trails, profits wrung from commercial exchange rather than economies of scale, and a sparse, footloose workforce often earning less than the cost of food and supplies: the challenges to increase latex output in the Amazon confounded wartime officials. During the previous boom, observers noted that rubber yields were nearly immune to price fluctuations since tappers controlled the means of production. Neither the extraction nor the processing of rubber, which owed to the common knowledge shared by tappers, required the presence of specialists.[1] Moreover, tapping occurred almost exclusively in the dry summer months between June and December, since heavy precipitation during the winter bedeviled the coagulation of latex and access to trees; in the rainy season, tappers turned to other extractive activities, such as gathering Brazil nuts, or retreated to the nearest village or a small plot of farmland on the terra firme.[2] Wartime government guarantees of fixed rubber prices and below market supplies aimed to boost yields, but increased capitalization and regulation of the Amazon rubber trade would matter little if bosses eschewed expansion, tappers remained scarce and wedded to their work rhythms and subsistence patterns, and suppliers failed to synchronize shipments with seasonal fluctuations.

In 1940, government officials estimated there were 34,000 "active tappers" in the Amazon—based upon annual production of 16,000 to 18,000 tons of rubber, rather than official census

data—although worker output varied widely.[3] Along the Hevea-rich Juruá River near the Tarauacá watershed, for example, U.S. wartime technicians carped that production per tapper (*seringueiro*) ranged from 100 to 1,000 kilos annually, with workers cutting rubber anywhere from 10 to 120 days during the six-month dry season.[4] Such inconsistency led U.S. officials to bemoan:

> The seringueiros work only about one half the available working days for various reasons, some of which are: Sunday is a religious holiday, Thursday is Seringueiro day and his day to do what he pleases, every Saint's day must be celebrated and usually for more than one day; then if it looks like rain he can't work, if he feels a little bad he can't work for there is no one to tell him that he must, and deep down in his heart he has the idea that no matter how hard he works that the boss will get all his money anyway.[5]

Brazilian observers likewise condemned the "inertia" of the Amazonian caboclo as a "physiological, psychological, and social vice."[6] The forest dwellers' catholic embrace of subsistence and market participation, conflation of realms of work and leisure, and apparent contentment with a spartan lifestyle impelled government officials to scour for new laborers to fit the bill. The employment scouts devised a splotchy calculus of racial and ethnic pedigree, physical and psychological make-up, and environmental adaptability.

This chapter explores the binational wartime efforts at remaking Amazonian workers and their relationship to the natural environment. As a U.S. Department of Commerce official noted in May 1942: "It will require great, and constantly vigilant, manpower to regiment the Amazon. The jungle never gives way to man, unless there are more men than trees."[7] The Vargas regime, in promoting the March to the West, had preached the same for several years, echoing an old lament of Portuguese colonial officials and Brazilian imperial leaders. Now, a rubber emergency left U.S. policymakers shouting too that the Amazon labor force required greater numbers and doers, even as they bickered among themselves and with Brazilian officials over the profile of the recruits and strategies to maximize productivity.

Galvanizing agents from high offices in Washington and Rio de Janeiro to small towns in the Amazonian hinterland and northeastern backlands, publicity for the rubber campaign employed radio, film, posters, print media, advertisements, contests, church sermons, and public cere-

monies to recruit labor and popularize the program. In promising financial returns, government assistance, and patriotic laurels, boosters sought to promote tapping not only by expanding the labor force but by modifying its social meanings.[8] Gone was the historic death trap for military conscripts and migrants.[9] Gone was the Amazon's notoriety as penal exile for criminals and political prisoners and a lair of wayward or trafficked women. Gone was the inferno of "jungle novels" and sensationalist journalism.[10] Gone was the image of the Brazilian state as a coercive or shadowy force in the lives of the poor, endlessly parodied in popular verse in the unwelcome figure of the tax collector, inspector, judge, police officer, and military recruiter.[11] Amazonia was no longer "the green hell of yore but now the promised land."[12] Debt peonage and worker disenfranchisement would wither away as migrant-tappers bloomed into remunerated servicemen and rights-bearing citizens. Outside specialists would rectify native mismanagement or neglect of natural resources.

More broadly, the rubber campaign trumpeted the reconstitution of politics in Brazil and the United States. Amazonia lay a long way off from the centers of political power in both North and South America, but its proper regimentation could be brought home to viewers, listeners, and readers in São Paulo or St. Paul as a marker of good government and (inter)national unity. For the modernizing Vargas regime, the remaking of the Amazonian landscape entailed a political rite of feudal exorcism. For U.S. emissaries, a Good Neighbor's technology and capital transfers would wow the public in Brazil and at home, extend the Eagle's shadow over the heart of South America, and civilize the natives. In both countries, the Amazonian program became a matter of national security: U.S. press coverage of the Rubber Development Corporation's operations in the Amazon required clearance from Washington, while Brazil's National Security Council screened prospective employees in the rubber program.[13]

The wartime manufacture and sale of public policies in the forest, as we will explore, represented an exercise in (mis)adventure. They reflected what James C. Scott has termed a "high modernist" ideology, or the proclivity of state planners to standardize and oversimplify the variability of the human and natural environment.[14] In the context of Amazonian history, they exhibited the longstanding tendency of outsiders to imagine the region in Manichaean terms rather than to contend with some of the contingencies and ambiguities examined herein.[15] Wartime programs, however, also had a marked impact on Amazonian history. Binational

governmental efforts underwrote the transfer of tens of thousands of migrants to the Amazon. And although a chasm separated recruitment goals from outcomes, and legislation from enforcement, wartime policies also reveal how fledgling welfare states in the Americas aspired to standardize the social rights and obligations of citizens in seemingly the most unlikely of places.

Confronting Modes of Production and Exchange in the Amazon Rubber Trade

Historian Barbara Weinstein's seminal study of the great Amazon rubber boom (c. 1850–1910) analyzed the trade's pyramidal structure and non-capitalist mode of production. At the base was the tapper, who typically tended to two trails, connecting between 100 and 200 rubber trees in the form of loops of perhaps some four miles in length, and worked on alternate days. Rubber trails (*estradas*) constituted significant human interventions in the forest. Wide, cleared of vegetation, and dotted with bridges and steps linking trees, the meandering loops comprised an artificial landscape underneath the forest canopy that clearly differed from the narrower, straighter, and more trodden paths in the forest.[16] Armed with a tapping knife, a rifle, and a *poronga* (kerosene lamp), the seringueiro set out in the predawn hours along a trail, slashing each tree and inserting a small metal bowl to gather the oozing latex (see figure 3.1). In the afternoon, he made a second round to retrieve the accumulated liquid, netting some twenty to thirty liters of latex for a trail with 120 trees, and returning to his residence, a hut made of paxiuba wood and a thatch roof and constructed on piles. In the smokehouse in his yard, the tapper placed burning palm nuts beneath an inverted cone open at the top (see figure 3.2); using the smoke that poured through the opening, he hardened the latex by rotating it on a wooden paddle. This produced a *péla*, or oblong ball of fine rubber, weighing between thirty and fifty kilos.[17]

A tapper's expertise resided in his ability to execute closely spaced incisions of a precise depth that kept the tree healthy and maximized the amount of latex yielded over the long run. While a skilled tapper would use procedures appropriate for each tree—considering the resistance of the outer bark to the blade, the format of the trunk, and his own knowledge and manual dexterity—an incompetent worker might damage rubber trees due to errors with incision, the division of the trunk, or the tapping schedule. Thus, aggressive tapping might double output, but could

Figure 3.1 Early twentieth-century photograph of Amazon seringueiro beside Hevea with tapped tree panel. Upon making his second round on the forest trail to collect latex tapped earlier in the day, the seringueiro would pour the contents from smaller bowls into an aluminum bucket. The tapper relied on a rifle for protection and for hunting, and stored food or medicinals gathered during the trek in a *jamanxim*, a straw backpack. *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

Figure 3.2 Tapper smoking rubber with palm nuts. *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

destroy the tree after two to three years. In this sense, the alternate-day and seasonal tapping schedules decried by observers as a mark of indolence may be viewed as a form of productive investment.[18]

Tappers delivered their weekly or monthly output of rubber to the main trading post (*barracão*), controlled by either a large landholder (*seringalista*) who leased the trails to them, or a local merchant (see figure 3.3). Rubber devoid of impurities would be classified as *Acre fina*; rubber that coagulated improperly or with visible impurities (*entrefina*), and strips and pieces of rubber that had hardened naturally (*sernambi*), commanded lower prices (see figure 3.4). Tappers' compensation typically came in the form of goods or credit, often under unfavorable systems of exchange: many tappers became saddled with debt as bosses deducted a significant percentage of the market value of rubber for transport costs and taxes, and overcharged for food and supplies. The seringalista then shipped the pélas directly to one of the major urban centers in the Amazon, if the trading post had a wharf where steamboats could dock. If not, or if the boss received cash and goods from a merchant of a wet and dry goods store in a nearby town who served as an agent for a larger commercial firm, the rubber would be sent to the local merchant. Rubber would then be placed on a ship owned by a state-subsidized company or a large rubber trading firm and, upon arrival downstream, stored in the warehouse of a commercial firm (*aviador*), inspected for impurities, crated, and prepared for export. Aviadores sold the rubber to the export houses—the first time that transaction occurred on a cash basis—who served as agents for buying firms in the United States and Europe, and who determined rubber prices. The aviadores also contracted with importing houses to distribute goods to small-town merchants, seringalistas, and tappers; advanced credit for goods, tools, and labor to open up new rubber districts or set up commercial contacts; arranged for the transport and distribution of northeastern migrant labor; and acted as legal and financial agents for wealthier clients upriver.[19]

With the interwar ascendancy of Asian rubber, a downturn in the Amazonian trade weakened ties between the productive zones and market centers.[20] Overall rubber output dropped. For example, on the Abunã River, the well-stocked tributary of the Madeira, rubber production plunged from around 2,000 tons annually during the boom years to 750 tons by 1941.[21] Similarly, between 1912 and 1915 an estimated 3,200 seringueiros on the Javary and its affluents delivered 1,800 tons annually, but by 1941, there were fewer than 1,200 tappers producing 365 tons.[22]

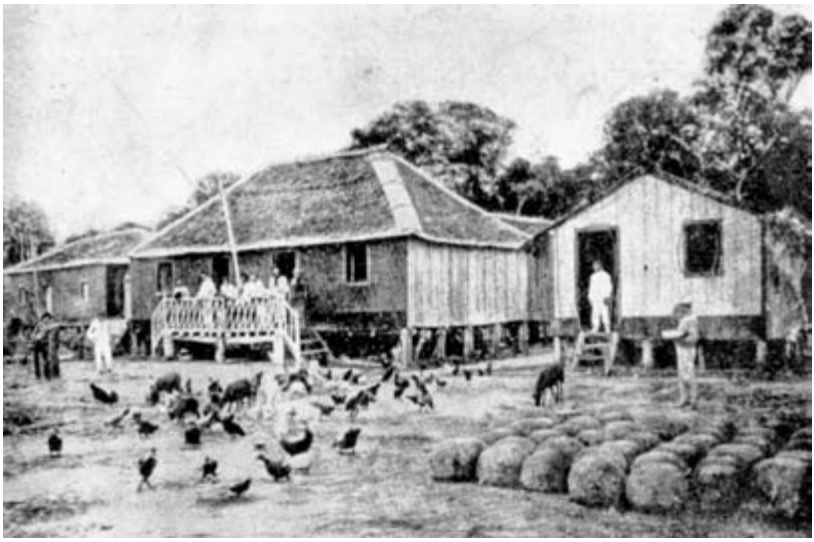


Figure 3.3 Photograph of Seringal Remanso in Acre from early twentieth century. The barracão (trading post) is the larger building in the center. *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

Figure 3.4 Owner and manager of seringal undertaking inspection and weighing of rubber. *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

Many upriver workers migrated to the relatively rubber-free areas along the Solimões River, where they cultivated tobacco, manioc, and jute and grazed cattle.[23] In his 1927 survey of the Solimões (Middle Amazon) region, for example, Father Constant Tastevin found that the communities of Coary, Tefé, and Fonte Boa boasted 30,000 inhabitants, whereas eighty years earlier the entire river had barely 5,000. Among the newcomers, he noted, were Cearenses from seringais on the Juruá, Jutahy, or Japurá who had resettled on the Solimões "where life is easier and more independent, as the capital is closer and imported merchandise cheaper while exports are less burdened with transportation costs."[24] Likewise, during his visit to the Solimões in the early 1930s, geographer Robert Platt reported on the Cordeiro family, a couple with two young children "of mixed Negro and Indian stock" that lived in a palm-thatch hut on two recently cleared acres of forest about ten miles north of Manaus. He speculated that the family belonged to the rubber-gathering population of the upriver regions, but had since turned to marketing charcoal and cassava in the city, and growing beans, pineapples, and other food crops for subsistence. In the upriver rubber zones, residents turned to other extractive commodities and forms of subsistence. For example, at Perpétuo Socorro, located thirty miles from Brazil's western border, tappers continued to deliver rubber to the trading post, where they received cloth and knives as payment from the trader. But they also furnished wood to a steamer making monthly trips to Manaus; fished in flood-plain lakes for the sturgeonlike pirarucu (dried on open-air platforms and marketed); hunted peccaries (whose hides were commercialized as pigskin leather); and wove hammocks from palm fiber. Bananas, manioc, sugarcane, and corn grew on several acres of cleared land near the trader's house, and residents had planted the same crops on their own plots.[25]

By 1940, the terms of exchange for some tappers may also have loosened somewhat. The more "traditional" setup, said to predominate in the state of Amazonas at the time of Pearl Harbor, obliged the seringueiro to deliver all of his rubber to the boss, who in turn consigned the rubber for sale in Manaus or Belém, deducting 20 percent of the sale value in compensation for rent, maintenance, and transportation. Under this arrangement, the seringueiro had to purchase all of his supplies from the boss, who defended goods sold with markups of no less than 100 percent as reasonable charges to cover the steep cost of freight, insurance, warehousing, and distribution.[26] The economic bust had also

brought about another arrangement, said to predominate in the federal territory of Acre. Lacking access to credit, seringalistas charged tappers an annual rent of 30 to 60 kilograms of rubber for every two or three trails that they worked but allowed them to purchase merchandise from peddlers (*regatões*), whose sales prodded bosses to reduce markup by as much as 50 percent.[27]

War-era observers, however, undoubtedly overdrew the distinction between hidebound Amazonas and liberalized Acre, since systems of exchange in the rubber trade long varied from one seringal, river, and region to another. Moreover, tappers' pooled labor and varied uses of forest resources helped to sustain communities both under and outside formal trade regimens. Indeed, Mauro Barbosa de Almeida's fine-grained ethnographic study of the rubber tappers of the upper Juruá River from the 1980s details the constitution of an Amazon forest peasantry organized in *colocações*, or settlement areas, containing anywhere from one to four houses. Although each house might not have contained a nuclear family, most members were relatives, who pooled labor and took detailed decisions over the volume of rubber production, the use of labor time, and the exploitation of trails. Tapping groups, for example, consisted of household heads and available male labor; women and older children who gathered latex during short periods and usually during the daylight hours; and even hired men who worked in teams of two with the household head. And rather than isolated families linked only to a trading post, extended networks composed of several linked macrohouses served to reinforce real and fictive kin relations, constituting spheres of interaction within which people cooperated in household or yard chores, shared meat, exchanged gifts, held parties, found marriage partners, and joined together to face conflicts. Residents' extensive knowledge of forest ecosystems shaped varied niches of activity, whether hunting, fishing, gathering, extracting, or planting.[28]

Struggles on the Seringais

As during the great boom, war-era rubber bosses struggled against the spatial distribution and autonomy of tappers, the vicissitudes of nature, the dearth of capital, and the tenuousness of state power in the rural Amazon. Debt peonage, for example, may have enslaved workers in isolated cases and locations, but tappers were too mobile and often too remote to be trapped by debt, and the use of legal channels for debt recovery was too onerous.[29] In the 1940s, for example, João Antonio de

Oliveira did bring criminal charges against tapper Artur Batista dos Santos for the theft of his canoe, which the latter had appropriated after being denied permission to take his ailing wife to the Hospital de Perpétuo Socorro in Guajará-Mirim, and which was set adrift following the couple's disembarkation in town. Oliveira's resolve to pursue criminal charges—despite Santos's offer to debit the value of the canoe from his account—may have stemmed from anger at the tapper's disobedience and was certainly facilitated by his relative proximity to law enforcement in the border town.[30] Similarly, creditors managed to obtain judgment for a public auction in Rio Branco, Acre, of tapper Francisco Fausto's goods—including 5 pélas of rubber marked "Fausto" weighing 230 kilos, and a Winchester rifle and cartridges.[31] Yet far more commonplace for parties contemplating the courtroom for debt recovery were the hurdles that confronted the denizens of Brasiléia, Acre: the nearest judge was a four- to five-day journey away.[32] In any event, debtors had few assets to seize. When tapper Antonio Silva died on the Rio São Domingos, he left behind one old canoe, two 16-caliber rifles, and one broken guitar, as well as his hut and smokehouse. When José Antonio do Nascimento died in 1943, his worldly belongings consisted of one mosquito net, two fishing nets, two pairs of pants, two pairs of underwear, one pair of old shoes, four plates, two enamel mugs, two pots, a small knife, a tin of lard, eight hooks, eight bullets, half a can of gunpowder, a small hammer, a hoe, an alarm clock, a container of hair brilliantine, two cruzeiros in specie, an umbrella, a broken rifle, and a balance of 395 cruzeiros with his boss.[33] Many bosses undoubtedly resembled Frederico Machado in Barcellos, who lamented to the Manaus-based forwarding firm of J. G. Araújo in 1941: "Our customers [*fregueses*] here only pay us when they want to because they have nothing to guarantee their accounts with us except for their labor and we do not have laws that require them to work until they pay off their debts."[34]

Amazon bosses might also threaten or resort to violence to coerce or retain labor.[35] Irishman Roger Casement's shocking 1910 report, commissioned by the British government, denounced the pervasive brutalization of the indigenous labor force in the Amazonian rubber trade.[36] Likewise, in the 1920s, Father Tastevin noted that the population loss on the upper Juruá owed to "the drop in rubber prices, and the abuse of certain bosses who beat their workers with iron cables."[37] And in March 1943, a Porto Velho newspaper recounted the case of six tappers who had fled the Seringal Palmeiras because they feared being enslaved but were captured

en route by the boss's posse on the Rio Candeias, where several casualties ensued.[38] Throughout the Amazon today, stories abound of bosses who tortured and murdered tappers with impunity.[39]

Yet seringalistas also had compelling reasons to eschew systematic violence as a mechanism to ensure social control.[40] Armed with knives and hunting rifles, tappers might retaliate with physical violence or destruction of property.[41] Thus, José Pereira da Silva, a seringalista with a reputation for "using violence against his tappers, as almost all of his former tappers could corroborate," was physically assaulted in Guajará-Mirim by a former worker after the boss refused to pay for the construction of a hut that he had commissioned. At the trial of Silva, who stabbed the worker in "self-defense," one of the witnesses noted that the boss "had long been threatened with beatings and aggression by some of his ex-seringueiros, who refuse to pay up their accounts, fleeing at collection time and even going to work for new bosses without his approval."[42] Indeed, Silva alleged that his assailant had mutilated rubber trees with "monstrous chops" and uprooted manioc prior to leaving the seringal.[43] Similarly, tappers Fortunato Porto and Raimundo Martins confronted the boss at Seringal São Francisco, Antonio Feliciano de Freitas, at the trading post after purportedly being cheated, suffering physical abuse, and going days without food. During the altercation, Porto clubbed the seringalista on the head and knocked him to the floor, where the two continued to scuffle. Martins and Porto then fled in two canoes to a nearby seringal.[44]

More commonly, as Father Tastevin's testimony suggests, brutalization prompted workers to abandon the property—and to warn others to stay away. On the Rio Candeia, Dr. Martins, a leading seringalista, had a hard time trying to recruit labor in Manaus because of his "bad reputation."[45] And because the Jutaí River had a "bad reputation for unpunished lawlessness," as well as poor epidemiological conditions, workers were reluctant to go there.[46] In fact, some bosses zealously defended their honor: in the aforementioned conflict at the Seringal Palmeiras, Bohemundo Affonso, the proprietor's brother, felt compelled to remind newspaper readers that it was the property's lessee who perpetrated the atrocities and not the "landowner whose hard labor of more than forty years never allowed him to deviate from a GOOD and MORAL path."[47] Such protests and qualifications offered small comfort to victims of violence, yet their very issuance suggests an informal and limited capacity to temper it.

With socioenvironmental constraints hindering labor control, bosses

sought to forge clientelistic bonds with tappers. Their paternalistic posture resonates in the 1934 "rulebook" (*"regulamento interno"*) of seringalista Otávio Reis. A prominent merchant on the Abunã River near the Bolivian border, Reis, who hailed from the southeastern state of Espírito Santo, operated numerous seringais by the mid-1940s, with a total workforce of some 700 tappers.[48] In his rulebook, he vowed to furnish his "customers" with workable trails and reasonably priced goods, to guarantee fair and punctual payment, and to tend to tappers' health. In return, Reis demanded that tappers avoid damaging bark and maintain trails in good condition, trade rubber exclusively at his post, and register any complaints "calmly and with good cheer." Rubber tapping has "liberated you from the foreman's whip, making the extractor the master of his destiny," preached Reis, describing the seringal as one big "family carrying out our tasks, irrespective of race, religious faith, nationality, and position."[49] While social mobility and harmony eluded most Amazonian rubber properties, Reis's desideratum underscores bosses' idealization of patron-client relations as a mechanism to coax production if not productivity, collaboration if not conformity, and honorability if not collegiality. In this vein, alongside relationships of godparentage and sponsorship of religious festivals on holy days, debt merchandising in particular aimed to promote tapper dependency and to discourage commercial exchanges with outside parties.[50]

Reliant on bosses for access to land and credit, tappers, too, understood the importance of vertical ties. In insalubrious regions with scant state services, a boss's credit line could literally be a matter of life or death. When balata tapper José Beserra fell ill, his boss, Raul Vilhena, authorized J. G. Araújo to advance payment for medical treatment at the Benficiência hospital in Manaus.[51] When tapper José Antonio do Nascimento sought medical care at the Cachuela Esperanza in Bolivia, his boss, Luiz Dantas, advanced the money to pay for transportation, the consular pass, and hospitalization (ultimately deducting the expenses, and burial fees, from the deceased tapper's estate).[52] And at the Seringal Parati, several tappers lauded the health care: in the event of a debilitating illness, the manager transported the patient to the trading post by donkey or by hammock, where he received food, medication, and the assistance of a nurse.[53]

On a more mundane level, credit enabled tappers to subsist and trade in the forest, since the absence of work supplies impeded rubber production, lack of bullets spelled defenselessness, and shortages of con-

sumer goods increased privation.[54] Wartime technicians, for example, estimated that a new tapper in Acre required one machete, one tin basin, one bucket, 1,000 small tapping cups, one 16-gauge shotgun, and one box of shells; a family of four that did not produce its own food would also need several kilograms each of coffee, rice, beans, sugar, salt, milk, butter, manioc flour, jerked beef, and dried fish, as well as kerosene, matches, and tobacco.[55] Indeed, as one traveler on the upper Purus River noted, "High prices on goods revolt all seringueiros; however, shortage of merchandise disgusts them considerably more."[56] Seringalista Eufrozino Gomes de Araújo could certainly attest to that: in 1940, he complained to J. G. Araújo that as a result of the firm's failure to provide goods on a regular basis, his "customers" refused to do business with him "due to the delay in sales and the lack of products."[57] And in 1945, Francisco de Assis Vasconcellos reported that he had to remain on Seringal Tabatinga near Sena Madureira, Acre, because he feared "an uprising by his clientele" fueled by the lack of merchandise on his property (and the region in general).[58]

But the significance of credit was more than utilitarian. In his account of a 1929 boat voyage from Belém to Rio Branco, Pedro Mattos described a "caboclo" that disembarked at an upriver dock in search of necklaces, pendants, perfumes, soaps, and other knickknacks that "have such value for individuals isolated in the immensity of the forest seeking to thank and please their female companion."[59] Mattos reinforced the stereotype of the spendthrift river-dweller and of consumption driven by frivolous female tastes; other observers more even-handedly noted that the "average seringueiro" not only occasionally bought handkerchiefs, hats, shirts, and hose and shoes for women, but also "luxury items" such as cachaça, perfumes, and hair oils for himself.[60] Still, these accounts indicate that debt-merchandising also allowed for the acquisition of urbane accoutrements in regions where possession of consumer goods distinguished their holders from "primitive" Indians, and gender imbalance spawned stiff competition for female companionship. To affirm that petty consumerism may have adorned hardscrabble lives in the forest need not enthrone a "rational peasant" governed by market principles.[61] Rather, it suggests that dignity emanated from how one resolved to spend one's time as much as one's scant resources.

Tappers also possessed distinct understandings of debt-merchandising. Payment in kind, rather than specie, did not necessarily amount to evidence of exploitation since cash transactions mattered little in remote

zones of rubber production. Viewing credit as an advance or even a bonus, tappers sought to turn what observers saw as coercive to their advantage.[62] Indeed, revisionist scholarship in Latin America has explored the varied roles of debt under different systems of production and historical moments, and emphasized the importance of understanding the perspectives of the subjected labor force.[63] For example, anthropologist Neide Esterci's research in the 1970s concluded that in relations based heavily on reciprocity, workers felt a moral obligation to their boss for protecting or assisting them; they did not necessarily question the notion of debt per se, but their lack of control over it.[64] Mauro Almeida also found that although rubber tappers considered the advance credit system and the corresponding debt as legitimate, they did not accept as equally legitimate either the monopoly clauses demanded by the patrons or the use of violence to ensure them.[65] In the Amazon rubber trade, debt established a commercial bond among unequal social actors, who struggled to moderate its terms and to determine the proper boundaries of social legitimacy and honor.[66]

Nor, we might add, were tappers always in the red. When seringalista Alfredo Severino Gomes died intestate on the upper Madeira in 1942, the inventory of his estate showed that a number of tappers and salaried workers received their outstanding balances: tapper Antonio Costa collected CR$1,039.80, Raimundo Merência received CR$4,713, and Nazário Merência came up with only CR$481.69.[67] Indeed, when bosses set prices for necessary consumption by the measure of the least productive houses, households with greater productivity—based on the number of trails and/or workers per house—could benefit from surpluses in commodities beyond the minimum reproduction cost.[68]

Since bosses punished troublemakers, tappers had additional incentives to acquiesce, if not cooperate. For example, when the operator of Seringal Ouro Negro dispatched José Bento Cavalcante to seize his fugitive co-worker, Severino Silva, he debited Silva's account for the expenses incurred in his capture, while crediting Cavalcante for the same amount.[69] When Martins Claro da Silva spread rumors that the seringal manager had sold his customers used rifle cartridges, fellow tapper José Souto de Lima cursed the accuser as a "son of a bitch" and a "bandit"—although Lima paid for his managerial allegiance, and his sharp tongue, with his life.[70] Likewise, Francisco Jacinto da Silva's comrades balked at his plot to confront the property manager and seize the trading post in retaliation for chronic short-changing: aside from having "no complaints,"

the long trek from their huts to the barracão would reduce their "capacity to produce in order to pay for the merchandise that had been furnished to them."[71] In official depositions such as these, tappers undoubtedly laid clientelistic deference on thick, but that was exactly the point, since loyalty had its perks.

To temper abuses, which included gouging, short-changing, fining, physical violence, and abandonment, tappers employed multiple strategies in the absence of formal legal recourse. In 1931, for example, thirty-five armed seringueiros expelled the manager of the Seringal Iracema near Xapuri, leading the federal interventor in Acre to request munitions to assist the local police in restoring order.[72] Yet taking up arms against bosses or managers was most likely not the commonest response; most of the criminal cases in the judicial archive in Rondônia that I consulted involved violent confrontations among seringueiros over charges of theft, adultery, and insults to masculine honor—conflicts that reflected competition among peers for access to goods, status, and female companionship. Relocation proved a more standard move for malcontents on the seringais, since the natural landscape may have hampered escape but also surveillance, while some bosses merely showed disaffected workers to the door. As the manager of the Seringal Parati noted, when a seringueiro demonstrated "lack of interest" and salaried work could not be found to cancel his debt, he would merely be asked to leave, "even though he still was owing."[73] Similarly, seringalista Frederico Machado observed that on the Rio Negro "when a customer leaves without paying, the new boss assumes responsibility for what he owed," indicating that new bosses often paid off workers' outstanding debt to previous employers, as mandated by the Brazilian Civil Code of 1916.[74]

Socioenvironmental conditions favored additional mechanisms for remediation. Trade with river peddlers, who plied the waterways of the Amazon since the first rubber boom, punctured commercial monopolies. In 1943, for example, lessee Henrique de Oliveira Bastos railed against interlopers who sold cheaper goods to tappers on layaway plans, paid higher prices for rubber, and badmouthed bosses as "thieves and liars."[75] Similarly, Antonio Rosas Sobrinho, the lessee of the Seringal Nova Empresa, announced in a Rio Branco newspaper that he would crack down on the "outrageous practice of clandestine and unauthorized traders" who had been "invading" his properties.[76] Tappers' methods of extracting and smoking wild rubber, which likewise eluded bosses' direct supervision, offered other shortcuts. Sap from *sorva* (cow tree) and other latex-yielding

plants mixed into cured rubber was difficult to detect through simple inspection, while soil, pebbles, sand, and other tree saps also found their way in.[77] The commercial firm J. G. Araújo even reported the spectacular case of a 22-kilogram péla from the Juruá River that was composed of pieces of wood covered with rubber whose actual content amounted to no more than eight kilograms.[78]

Ultimately, tappers' varied forms of land and resource use served to mitigate unfair exchange or the inadequacy of supplies. Indeed, as Almeida points out, rubber tappers are best understood as extractors, cultivators, hunters, fishermen, and artisans, who mapped and used natural resources through technical procedures that depended on both the forest niches and imported equipment. His ethnography provides a rich account of households' distinct use of forest resources: from extraction of latex and collecting along the trails; to a hunting economy that employed diverse techniques and strategies to kill pacas, deer, tapirs, boars, agoutis, monkeys, armadillos, and squirrels; to annual planting of maize, beans, watermelons, potatoes, tobacco, and manioc on the várzea upon the conclusion of the rainy season; to triennial planting of manioc on plots of newly cleared forest; to raising of livestock and fowl, vegetables, medicinal plants, and calabash trees (for gourds) in the yards. These multiple activities relied on residents' extensive knowledge of forest ecosystems, whether the location of a rubber tree, a stump with bees' honey, a heart of palm or another with ripe açaí, a trail frequented by paca, a river bend teeming with fish, or a riverbank whose clay would serve to smooth one's hair. Access to forest resources and simple technology even allowed for the substitution of many consumer goods, although cutting back might mean a certain diminution in self-image.[79] In this sense, forest resources served as both a springboard and a buffer for tappers' insertion into the market economy.

Bosses and tappers linked in a vertical commercial hierarchy understood that in the absence of public assistance, competitive markets, and the rule of law, life could indeed be nasty, brutish, and short. A trading system marked by quasi-contracts and legitimized by informal rule assumed primacy in establishing certain order in and for the forest, sustaining the century-long resilience of the rubber economy. But given that risks and dividends of the forest trade were profoundly unequal, conflicts abounded. Traders and tappers often attributed misdeeds to greed, ill-will, jealousy, or desperation, but such actions also reflected broader contests over the uses and meanings of forest resources.

Brazilian and U.S. wartime officials, vexed by the Amazon rubber trade's undermanned properties and inconsistent outputs, demanded new bodies and mindsets. In their estimation, only 20 percent of the existing labor force in the forest would work "well and most of the time" in rubber; and although authorities deemed some residents nearer to the Amazon's urban centers likely to be lured by higher rubber prices, they did not expect much from former tappers who "gave it up for farming, fishing, or just plain loafing."[80] In the quest for the model jungle labor force, government officials wrangled over workers' rights and obligations, and the best methods to reach and teach them. Their deliberations not only underscore how visions of the Amazon derive from historically specific matrixes but have ramified in public policies with far-reaching consequences.

The Race for the New Amazonian Worker

Brazilian and North American policymakers assessed the competence of prospective wartime laborers in the Amazon in part according to their racial and ethnic stock. These were old topics for the tropics, as evinced by Brazilian and North Atlantic racial science and immigration debates. In 1924, for example, University of Michigan agronomist Carl LaRue affirmed, "a million Chinese in the rubber section of Brazil would be a godsend to that country," echoing an old refrain of foreign observers of the Amazon rubber trade that "the sooner the Orientals come along and, by their competition (and by interbreeding), raise the efficiency in the native worker to their own level, the better for Brazil, and especially for the native, and it is only false kindness to say otherwise."[81] For his part, Governor of Pará Dionysio Bentes noted in a Belém daily in 1926 his preference for white immigrants over blacks due to their "degree of development."[82] But age-old debates about race, geography, and national character took an urgent turn in wartime. Deeming Latin American laborers "neither experienced nor industrious enough" to produce adequate latex, Pennsylvania Congressman Charles Faddis, a member of the House Committee on Military Affairs, introduced a bill in March 1942 to import men from the East Indies, "both Caucasian and Malayan," to serve as managers and laborers, respectively.[83] And U.S. author Henry Albert Phillips opined that the Brazilian worker, "even when vitaminized to his highest pitch of energy," lacked the initiative of the European "to open wide the deadly jungle, or to invest a generation or two of settlers in the toil and moil, sacrifice and innovation of the pioneer."[84]

In Brazil, the wartime quest for the ideal Amazonian worker assumed racial and nationalistic tones as well. Japanophobes, who had railed against earlier land concessions to Japanese in the Amazon as "the danger within [national] borders," prevailed upon the Vargas regime to relocate immigrants in the vicinity of Belém and Parintins to a concentration camp in Tomé-Açu, Pará, for the duration of the war.[85] And following the U-boat sinking of the *Baependi* in August 1942, which claimed the lives of hundreds of Brazilian civilians, a crowd in Manaus retaliated by trashing the German consulate and jailing the consul, raiding the office of Bayer pharmaceuticals, and destroying the Bhering Export House.[86] In sum, the question of who belonged in the Amazon was also premised, in part, on ethnic and racial exclusion.

Although some Brazilian policymakers dreamed of welcoming European refugees to the Amazon, the Vargas regime rebuffed wartime proposals to import non-Brazilian labor.[87] Disruptions in Atlantic shipping had scuttled mass transoceanic transport, but recruitment of Brazilian nationals was also favored due to the government's fragile hold on the Amazon amidst mounting U.S. involvement; immigration restrictions that aimed to safeguard the nation's "traditional" ethnic formation; designation of the Amazon frontier as a domestic safety valve; and elites' conviction that Brazil's climate-hardened and miscegenated populations were "naturally" suited to clear the jungle. Fearful of antagonizing a key wartime ally, the U.S. State Department toed the line. Still, with Brazil's forty million people residing mainly near the eastern littoral, German attacks on coastal shipping, and understaffed government agencies ill-equipped to effect mass population transfers, controversies swirled over which workers to target.[88]

Indigenous peoples, for example, stirred public policy debates. Due to a history of enslavement, proselytization, and miscegenation, the native Amazonian population had dwindled in 1940 to between 30,000 and 40,000, according to government estimates, of which officials expected no more than 10 percent might work in rubber.[89] But since Indians were "on the spot and well adjusted to all phases of living in the area," one U.S. official argued, they would require "no particular expenditures such as for recruitment and transportation of labor and the providing of many so-called essentials which need to go to the more civilized workers."[90] Officials in Brazil's Indian Protection Service (SPI) pointed to the Munduruku contribution to the rubber campaign as an indication of native patriotism and the agency's success at indigenous integration.[91] On the

other hand, irked by reports of Indian attacks on rubber tappers on Acre's Jaquirana River, rubber technician Constantino Alexopoulos questioned

> why we are willing to bomb German cities in order to preserve our liberty, but hesitate to use the same methods with the Indians for the same purpose. The truth of the matter, as it now stands, is that unless the Indians are cleaned out of the rubber-producing regions, this method of increasing rubber production disappears.[92]

Alexopoulos's endorsement of native genocide reveals the extremes that some have contemplated to remake the Amazonian landscape in the name of liberty.

Perhaps one of the most unorthodox suggestions for harnessing indigenous labor in the Amazon came from Ernest E. Maes, a field representative of the U.S. Department of the Interior's National Indian Institute. Maes viewed the SPI as the only Brazilian agency capable of assisting laborers in the rubber campaign but lamented that the Indian Service focused on the physical defense of unacculturated tribes and the protection of indigenous land, rather than offering support to acculturated Indians and the general caboclo population. "If they [the SPI] accept the thesis that a majority of the rubber collectors could be included among the segment of the population that by law comes under their protection," Maes argued, "then it would seem that they are the logical Brazilian agency to administer a program designed to increase rubber production by protecting the rubber collectors." Based on his estimate that about 1 million of the 1.75 million rural dwellers had "predominant Indian blood," this would represent a substantial gain.[93] Maes, however, had not only mistakenly endowed the anemic Indian Service with jurisdictional stamina but had assumed that local populations, irrespective of ethnic classification, would mobilize to tap rubber with due diligence. His proposed biological criteria for defining Indianness in the Amazon dismissed local understandings of racial identity that were based upon phenotype and conformity to dominant Luso-Brazilian cultural patterns.[94] Maes's Amazonian census, in other words, replicated another common misconception of outsiders: that most of the region's population was, or should be considered, Indian.[95]

An alternative labor scheme entailed the remotion of Rio de Janeiro's poor to the forest, one of the Vargas regime's proposed correctives for rapid population growth in southern cities. In January 1943, SEMTA dis-

patched 300 men overland to the Amazon from the Albergue da Boa Vontade, a shelter in the capital maintained by the Ministry of Labor. The following month another 1,242 men signed up for the rubber campaign, although 206 (or 16.58 percent) failed to embark. The director of Boa Vontade provided some statistics on the recruits: 94.76 percent were bachelors, 78.42 percent were literate, 52.5 percent had a *carteira professional* ("working papers"), 48.6 percent were army reservists, and only 31 percent were originally from Rio de Janeiro. He listed their racial background as 44.2 percent white (including fifteen foreigners), 39.14 percent *pardo* (brown), and 16.6 percent black.[96] One migrant, a merchant marine who had spent time in prison for insubordination, told a reporter that he yearned to labor in the Amazon for the "victory of human freedoms."[97] It is unclear whether release from jail was contingent upon embarkation to the Amazon; banishment to the forest (*"desterro"*) formed an old tactic of the Brazilian state to punish labor radicals, political dissidents, and vagrants. In any event, Brazilian authorities soon shelved recruitment from Rio de Janeiro due to the high cost and logistic complications of transportation to the Amazon, employer opposition, and worker desertion.[98]

Most wartime migrants to the Amazon hailed from the northeast in an odyssey naturalized by elites as the outgrowth of racial heritage, physical ruggedness, and innate wanderlust.[99] One treatise noted that "the *sertanejo* [resident of the northeastern backlands] has amalgamated in his psyche the Indian's characteristics of resistance and environmental adaptation with the boldness of the white colonist."[100] Likewise, according to the *Revista de Imigração e Colonização*, northeasterners constituted the "genuinely Brazilian element spread out throughout the vastness of our territory, principally in the north," and an "ethnic reserve of the first order for miscegenation from which, in the future, will emerge the Brazilian ethnic type now in formation."[101] Or as Felisberto Camargo wrote to the OIAA representative in Brazil in 1941: "Having lived in constant struggle against tropical endemic diseases, the sons of the Amazon itself or sons of the northeast territory are the only ones capable of carrying out the first steps for the conquest and utilization of those lands. Brazil has always counted on the capacity of these sons for all initiatives required in this part of the country."[102] Yet competing visions of the Amazon led Brazilian and U.S. officials to differ over the gender and age of prospective northeastern migrants.

Tapping Masculinity

In the March to the West, the Brazilian government and the Catholic Church favored the subsidized migration of northeastern families to the Amazon under the aegis of the Ministry of Labor's National Department of Immigration (DNI).[103] Family colonization would assuage moral panic about the skewed sex ratios on the rubber properties and sustain long-term regional development. The *Boletim Geográfico*, for example, labeled tappers "sodomites, onanists, sexual perverts due to their social state."[104] Brazilian elites insisted that only women's "moral, affective, and physiological" ministrations would keep masculine vice in check.[105]

United States officials, however, worried that family migration would hamper Washington's primary goal of boosting rubber production in the Amazon. Due to German submarine attacks on the Brazilian coastal trade and limited shipping space, only 9,088 nordestinos had been transported to Belém (the port of entry to the Amazon) in 1942, many of whom headed for the agricultural zones of Pará rather than the rubber properties.[106] Moreover, as U.S. officials bemoaned, adult male laborers represented less than one fourth of the total passengers amidst larger numbers of women and small children.[107] In November 1942, Vargas established the Serviço Especial de Mobilização de Trabalhadores para Amazônia (SEMTA) to meet U.S. demand for mass recruitment of male laborers to the Amazon, and to assist with drought evacuation in the northeast. With full U.S.-government subsidization, SEMTA committed to transport 50,000 men between the ages of 18 and 45 to the Amazon by mid-1943, although the DNI continued to relocate northeastern families to the Amazon for the duration of the war.[108]

Hailing the creation of SEMTA, Brazil's coordinator of economic mobilization João Alberto Lins de Barros vowed to earn recruits' "confidence" by "granting them all necessary assistance" on their journey to the Amazon.[109] Upon the successful completion of medical examinations and vaccinations, workers who enrolled with SEMTA signed a recruitment contract; in the case of illiterate workers, the document was signed by two witnesses. In return for a two-year commitment to tap rubber, migrants en route to Belém received free transportation, lodging, and medical care, as well as "religious assistance." The Brazilian government agency provided each worker with a shirt and one pair of pants and sandals, a hammock and mosquito net, and one dish and set of utensils. During transit, SEMTA paid eleven cruzeiros per day to workers with dependents

who provided labor service and ten cruzeiros to those without dependents; workers who did not perform labor service en route received seven and six cruzeiros, respectively. Migrants were charged three cruzeiros per day for meals and were liable for the damage or loss of equipment. The SEMTA guaranteed all recruits a minimum cash balance of twenty-five cruzeiros upon disembarkation in Pará, or the rough equivalent of six days' payment for menial labor in the northeast. The contract also obliged SEMTA to return migrants under the same conditions as established for recruitment if employment was "not advisable or possible" upon arrival in the Amazon.[110]

As in other wartime mobilization campaigns, gender ideologies underlay Amazon recruitment strategies.[111] Brazilian and American propaganda trumpeted rubber tapping as a bachelor's pay dirt for his bride-to-be, a breadwinner's meal ticket, a patriot's duty, and a he-man's workout. Such patriarchal ideals pervaded the northeastern backlands and were most likely cherished by many male migrants themselves in one variation or another—whether the head of household who smarted under the tenancy and sharecropping arrangements common in the region, or an adult son stifled by an overbearing father.[112] In a 1934 essay, for example, historian Thomaz Pompeu Sobrinho bragged that the hard-knock northeastern outback, unlike the coastal sugar plantations, had never bred "aristocratic milquetoasts with womanly hands, lazy bones, libertines, dandies ashamed of having legs and feet to walk and step on the ground like any slave or plebeian."[113] And popular lore and chapbooks trafficked in images of robust nordestinos who penetrated "virgin" forests, confronted hostile Indians, and defied villainous bosses.[114] "The seringueiro is a strong man / of tremendous courage," noted the *cordelista* [popular bard] Raimundo Nonato, the son of nordestinos who settled in Acre.[115] Or as José Pio de Lima, a wartime migrant from Ceará to the Amazon, recounted more than a half century later: "Life in the forest is only for someone who is very macho. The lazy ones did not stand a chance."[116] Walking in pitch-dark forest, confronting jaguars and poisonous snakes, hunting wild game, and producing and hauling large amounts of rubber constituted a source of pride for men on the seringais.[117]

Yet if Brazilian and American government officials had not invented these "macho" roles for nordestinos, they preyed upon men's anxieties to fulfill them. Newspaper articles reminded Cearenses that single men long migrated to the Amazon to earn money to "acquire a house and set up a home with his heart-felt, chosen companion."[118] In this vein,

a small Portuguese-language booklet in cartoon-format (most likely designed by the OIAA) recounted the adventures of a nordestino cowboy who left his ranch to try his luck in the Amazon. Although he pined for sweetheart Maria Inéz, good fortune smiled upon him: an experienced tapper taught him how to extract rubber, his earnings multiplied, and he sent for his beloved, whom he married in a festive ceremony in the Amazon.[119] Posters produced by the OIAA featured feminized commodities linked to the preparation of food and clothing—such as china, utensils, and sewing machines—whose acquisition would burnish tappers' reputation as breadwinners (see figure 3.5). And newspapers published excerpts of letters written by migrants in transit to their wives or mothers, including the cash value of remittances.[120] Alternatively, the mass media targeted fathers. "For the poor classes of Ceará, it is totally impossible to give their children a basic education because in most cases boys are put to work from the age of seven and the girls go to work as soon as they can as nannies in the houses of wealthy families," asserted one northeastern periodical. Migration to the Amazon would offer a father "the economic means to educate his offspring so that they do not become beasts of burden, as he himself is."[121]

The Brazilian government and media outlets also used shaming to cast stay-at-homes as sissies, slackers, and second-bests. If "strong men belonged and were in Amazonia," who were the homebodies?[122] If photographs of migrants showed "the strong bodies and bulging muscles of these men from the interior of the states of the northeast, accustomed to the rigors of the tropical sun and to 'earning their bread with the sweat of their brow,'" who were the weaklings on the sidelines?[123] If even a female employee of SEMTA could make the arduous trek from the northeast to the Amazon, surely none of the male recruits "would wish to be seen as weaker."[124] If Inácio Epifânio Souza could send CR$100 to his mother upon arrival in Belém, certainly "any single lad who remained behind in that deathtrap was a fool, especially when Brazil faced an emergency."[125] If "only the cowards and the loafers did not earn money in the Amazon," the losers had only revealed their true colors.[126] And if good taste openly disallowed it, recruitment posters conveying subliminal messages of penetration in the forest hinted at yet another titillating perquisite that stay-behinds would forfeit (see figure 3.6).

Wartime propaganda, however, heralded a new social role for rubber tappers: guardians of national defense and global freedom. Brazilian rubber tappers had long been hailed as conquerors of the Amazo-

41 - Pouco tempo depois, vendeu a bom preço e com dinheiro à vista toda a barraca que pertencia a Floriano. Este, então, abandonou o barracão e ficou chamando Maria Ignes. O casamento foi uma festança. Agora os dois são queridos de outra vida. Barraca boa, que Floriano não largou mão da fama.

Figure 3.5 Wartime propaganda, heavily reliant upon visual images, encouraged nordestinos to view rubber tapping as an avenue to respectable manhood based on improved social status, personal independence, and conjugal union. *Source*: National Archives.

Figure 3.6 Recruitment posters for the SEMTA agency designed by Swiss-born artist Jean-Pierre Chabloz, seated at center. The messages of the posters read: "More Rubber for Victory?"; "Rubber Campaign 'V'"; "Go Too to the Amazon, Protected by SEMTA," "Nordestino: Do You Want to Work in Amazonia? Enlist in S.E.M.T.A., which will give you passage, transport, food, a good contract, aid to your family, and medical and religious assistance." *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

nian hinterland—including the former Bolivian territory of Acre—but they now appeared in posters, films, newspapers, and official pronouncements as fighters for the "victory of democracy" and "liberators of enslaved peoples."[127] A SEMTA brochure entitled *Rumo à Amazônia: Terra da Fartura (Bound for the Amazon: The Land of Plenty)*, for example, declared the nordestinos' "obligation" to fight for world freedom "in the blessed lands of the Amazon."[128] A Fortaleza daily exhorted nordestino men: "It is time to guarantee for humanity the resources for the conquest of Freedom and the strangling of the Axis!"[129] And Álvaro Maia's *Na vanguarda da retaguarda* (1943) hailed tappers as the "vanguard of the rear guard," in the "universal war against tyranny and oppression."[130] The Vargas regime's official denomination of the migrant-tappers as "soldados" in the "batalha da borracha" ("soldiers" in the "battle for rubber") exemplified this patriotic encomium. As Brazilian newspaper articles from 1943 extolled, "The army of the 'soldados da borracha' is a brave legion of our countrymen entering the jungle under a glorious banner of staunch patriotism to extract from the miraculous tree the precious latex that is so necessary for the Victory of the United Nations."[131] With these "healthy and strong soldiers, Brazil will win, for itself and for the United Nations, the Battle for Rubber."[132]

Casting patriotic light on hardscrabble lives, the wartime rubber campaign conferred political prestige and social rights and responsibilities upon Brazil's marginal male populations. As a scholar of the military has noted, "Considered in purely mechanistic terms, the state needed unobstructed access to the citizen; in turn, to gain his willingness to work and fight for the state, the individual had to be offered political power, or—if that was impossible—new psychological inducements and social opportunities to enable him to reach full potential."[133] Militaristic salutes to the rubber "soldiers," in fact, were more than rhetorical: A decree-law issued by Vargas granted Amazonian tappers deferment of military service for the two-year period of their contracts.[134]

Drawing upon an array of culturally available symbols, gender evokes multiple and often contradictory representations.[135] Government officials, elites, and migrants and their families, in fact, struggled with the inconsistencies of masculinity for poor men in Brazil. Rubber tappers might have been at the "vanguard of the rear guard," but poor, young, transient working-class men have long been stigmatized as predators and vagabonds. The valiant backwoodsmen pursuing economic opportunity and patriotic glory left behind mothers, wives, and children vulnerable to

destitution and dishonor.[136] Intrepid jungle warriors had to perform unmanly domestic chores. And the vigor of men who braved the Amazon rendered their libidos suspect.

Government authorities thus undertook various measures to patrol normative gender roles or reconcile their contradictions. Men en route to the Amazon underwent medical exams and treatments for venereal disease, while officials prescribed physical exercise and religious ministration to sublimate "sexual vices and aberrations," and hospitalization and "treatment" for homosexuals.[137] For wives and children left behind, the SEMTA contract provided direct support from the time of the migrants' enlistment until placement on the rubber properties through monies set aside by the Rubber Development Corporation for a family welfare fund. The families would receive a minimum of two cruzeiros per day per dependent, and a maximum payment of eight cruzeiros, although workers with dependents were required to contribute one cruzeiro per diem to the fund as well. An alternative method of family support offered dependents lodging at SEMTA-run camps (*núcleos*) in urban areas of the northeast, while another arrangement promised assistance at agricultural cooperatives. The contract also stipulated that once on the seringal, the migrant worker could choose to continue to provide assistance to his family for the two-year duration of the tapping contract, with the amount recorded monthly in a booklet issued by the employer according to the existing law and provisions. Subsequently, in 1944, the procedure for family assistance following placement on the seringal was altered, with allowances for the corresponding amounts to be debited in the worker's booklet upon the termination of the harvest through the Banco de Crédito da Borracha. Assistance to dependents would terminate upon revocation of the contract or if the family joined the worker in the Amazon.[138] In sum, if popular perceptions in Brazil construed rubber tapping as a masculine livelihood, the wartime campaign for the "Battle for Rubber" deployed gender ideologies to hasten regional transformation of the Amazon.

Formalizing Labor and Citizenship in the Forest

War and military service play an ambiguous role in the forging of citizens and nations. The collective experience of shared danger and mobilization can bind isolated individuals or marginal ethnic groups to the nation-state in the spirit of camaraderie and patriotic duty and offer the most equal access for disadvantaged members of society. But military service may present untold danger and privation, and stigma, as well as

nonrecognition and nonpayment for veterans.[139] In Brazil, military recruitment had never been egalitarian, as army service historically fell upon the unprotected poor.[140] Since most laborers recruited in the rubber campaign lacked means and status, and fulfillment of new-found rights would be delayed for decades, postwar scholarship has harped on the victimization of migrant-tappers by the Estado Novo and its oligarchic allies.[141] That the Vargas regime failed to enforce the rule of law for rubber workers was devastating, but not altogether unsurprising: even with postwar consolidation of state power and aggressive infrastructural development, the Brazilian government has been challenged to combat violence, environmental depredation, smuggling, and debt servitude in the Amazon.[142] What was novel during the World War II era, however, was the binational government effort to standardize production and formalize rights in the Amazon forest.

The institution of a standard tapping contract in Brazil in June 1942 reflected the political ambitions of welfare states to mediate labor relations amidst wartime crisis. The contract apportioned to tappers 60 percent of the official price of rubber in effect in Manaus or Belém, without deductions for freight charges, insurance fees, taxes, or commissions; 33 percent to bosses as property lessees; and 7 percent to proprietors.[143] It obliged bosses as well to deliver workable trails, to assist tappers in constructing a *barraca* (shack) and *defumador* (smokehouse for curing rubber), and to advance foodstuffs, clothing, tools, medicine, and ammunition without overcharge. During the off-season, tappers were guaranteed a minimum wage for services to the seringalista, and the right to cultivate up to one-and-a-half acres of crops and to hunt and skin animal game. But the contract also required the seringueiro to extract rubber six days a week during the tapping season and trade exclusively with his boss, prohibiting change of employment unless a prospective employer settled his outstanding debt. Violators faced the prospect of confiscation of goods and "criminal legal proceedings." The Justiça do Trabalho, a special labor court created in 1939, was vested with the adjudication of disputes arising from breach of contract.[144] Where informal patron-client relations between "bosses" and "customers" long reigned in the Amazon, Brazilian government officials now spoke of mediating disagreements between "employer and employee: that is, seringalista and seringueiro."[145]

It is noteworthy that the Ministry of Agriculture had first drafted a standard tapping contract in January 1941 but met with vigorous opposition from bosses who insisted that any standard agreement "protect our capital

and good order."[146] The seringalistas' counterproposal required tappers to buy exclusively from bosses at the going rate in the region; held them liable for damage to rubber trees and for unauthorized trading (at double the value of a transaction, and triple for subsequent violations); and subjected those who absconded with credit advances to "legal measures or simply police action."[147] Tappers would have had the right to denounce abuses to (unspecified) government authorities.[148] But bosses seemed intent primarily on stonewalling any prospective government regulation of labor relations and commercial exchange.[149] They branded official safeguards useless for "individuals with little education and from miserable backgrounds who suddenly find themselves awash with money," and who squandered their earnings on urban shopping sprees or lavish homecomings in the northeast.[150] In general, Vargas-era agrarian elites argued that opportunities for social mobility in the countryside foreclosed the need for government regulation; if any group deserved "social rights," it was landowners, who were exploited by merchants, speculators, and industrial capitalists.[151] That the official contract of June 1942 ignored seringalistas' admonitions and even dropped some of the more punitive clauses aimed at tappers casts doubt on the seamlessness of Vargas's purported oligarchic pact.

Calls for rural social reform, in fact, were advanced on various fronts during the Estado Novo. Progressives in Vargas's Ministry of Labor denounced debt peonage in the Amazon rubber trade, calling for government assistance to "our abandoned brothers on the seringais suffering the darkest, most horrendous miseries."[152] The Conselho Federal do Comércio Exterior, which established a special commission in the early 1940s to study the economic problems of the Amazon, endorsed payment to tappers on a weekly or biweekly basis. In September 1942, the Ministry of Agriculture's Serviço de Economia Rural even proposed the creation of state-supported tapper cooperatives.[153] The push for social policies in the countryside also had the support of junior army lieutenants who had spent years traversing the backlands in rebellion against the republican government.[154] Indeed, biographical accounts of Chico Mendes, the renowned labor leader and environmental activist murdered in the Amazon in 1988, recount his acquisition of literacy as a teenager in the early 1960s from Euclides Fernandes Távora, a follower of Luis Carlos Prestes, who had led the lieutenants' revolt in 1924 and the failed Communist armed uprising in 1935.[155] Under the 1943 federal labor code, rural workers in Brazil gained the right to minimum wage, paid annual vacations, and notice prior to dismissal.

Brazilian government reformers had modeled the restructuring of the Amazon rubber trade along the lines of agrarian development in São Paulo. In the late nineteenth and early twentieth centuries, the state of São Paulo had subsidized the recruitment and transport of hundreds of thousands of European immigrants to the coffee estates, where they partook in a mixed system of sharecropping, wage labor, and subsistence. From initial efforts to provide immigrants with legal advice and examination of employment contracts, a more elaborate system of state protection for agricultural workers had developed by the 1940s throughout São Paulo.[156]

The invention of a rights-bearing Amazonian tapper drew ideologically upon the Vargas regime's credo of *trabalhismo*, which premised the political inclusion and social rights of labor on workplace productivity.[157] Brazilian historiography has underscored the masculinist bias of Vargas's corporatist project but has largely depicted trabalhismo as an urban, industrial matter.[158] The assessment may be more revealing of academic than government agendas. A radio address from November 1942, for example, reminded listeners: "In the Amazon valley, more than in any other place in the nation's territory, the most important labor is taking place, the most arduous task, the most enormous struggle, the most decisive effort during this spectacular hour."[159] Or as Abelardo Conduru, the president of the Banco de Crédito da Borracha, affirmed in a radio address of June 1943: "President Getúlio Vargas, the benefactor of the Amazon, sees in the seringueiro what he represents for our War effort, the worker who more than any other requires continuous assistance and care of the government, which is tending to him and providing better days for him."[160] Slogging away in the hinterland, the mixed-race tapper represented the authentic roots of Brazil.[161] Endowed with new rights, responsibilities, and respectability, he heralded its progressive future.

The institution of a standard tapping contract further revealed the influence of Board of Economic Warfare officials who endorsed protectionist policies for Latin American laborers in wartime procurement. Perhaps inspired by the Justice Department and the Abolish Peonage Committee's efforts to eliminate debt slavery in the southern United States, Leonard H. Heller, chief of the BEW Rubber Division, asserted: "We consider that an agency of the Government should not accept responsibility for establishing peonage conditions in Brazil which would be unconstitutional in the United States."[162] In this vein, the BEW urged Rubber Reserve not to oppose minimum wage and social welfare legislation

in the Amazon on the grounds that they raised the cost of rubber. Rather, the BEW suggested various measures to empower rubber workers and the Brazilian agencies entrusted with their protection, such as publicity campaigns to generate awareness of contractual rights, deployment of Brazilian labor experts to monitor conditions in the Amazon, and quotas and incentive plans to reward above-average rubber producers in either cash, goods, or prizes.[163] Under the labor clauses of the official rubber contract, the OIAA furnished assistance in health and sanitation programs.

Indeed, by spring 1943, more than 100 standardized labor contracts had been instituted for workers in Latin America engaged in the procurement of wartime materials.[164] None of the contracts applied U.S. labor legislation to foreign countries, but aimed instead at obligating governments and businesses in Latin America to comply with local labor laws, provide fair wages, and ensure health standards.[165] Nevertheless, board officials hailed the unprecedented efforts of the U.S. government to improve social conditions and strengthen alliances with progressive sectors in Latin America. "It is the first time in history," they noted, "that one nation, in negotiating for the products of another, has given an express guaranty against the exploitation of labor; has realistically and frankly recognized that laboring men and women who receive a fair wage, work reasonable hours and work and live under decent conditions of health and sanitation, actually produce more and better products than those who do not."[166] Although the archival documentation does not indicate a clear-cut role of the BEW in the formulation of the Brazilian tapping contract, it is reasonable to assume that U.S. progressives strengthened the hand of reformers in the Vargas government.

In an attempt to standardize forest labor, U.S. government officials also urged an overhaul of tapping methods. Of particular concern were "primitive" tapping methods that left the trunks of the *Hevea brasiliensis* scarred and knotty. Wartime technicians denounced the pervasive wounding of rubber trees, which occurred when tappers scraped off the cambium, or fine growth tissue between the bark and the wood, causing the formation of excrescences composed of stone cells covered by a thin layer of bark with few latex-producing cells.[167] On the Javari River, they claimed that "the trees have been ruined by deep and severe tapping with the *machadinha* and the Amazonas knife in the past and have become very unproductive."[168] In the Muaná district near Belém, they reported that more than one hundred trails had been reopened in October 1943, but the rubber trees had been so badly mutilated over the years that it was

impossible to employ a knife for a low panel; in many cases the workers had to use ladders to tap at a height of ten feet.[169]

In the technicians' minds, "good" tapping followed standard, mathematical formulae: cuts should leave one millimeter of bark outside the cambium, since less depth represented a loss of latex, while greater depth was apt to result in wounding and permanent damage to the tapping surface.[170] Touting the advantages of full spiral fourth-day tapping of mature Hevea trees over the half-spiral alternate-daily system practiced in the Amazon, W. E. Klippert offered a detailed time-motion comparison of the two methods based on a 120-tree task on wild trails—including walking from tree to tree, cleaning scrap from cut, cleaning the cup, and making tapping incisions. "It is the old story of saving unnecessary motion," concluded Klippert. "With this [full spiral] system one is able to obtain on one visit to the tree more than twice as much latex as can be obtained by two visits to the tree on the other system."[171] On their visits to the seringais and migrant labor camps, technicians promoted the Asian Jebong knife, which consumed less bark than the Amazon knife and hatchet.[172]

Since many of the RDC technicians had served as inspectors on Asian rubber plantations, their economistic concept of natural resource management is unsurprising. As the motto of the agency, emblazoned on instructional posters and illustrated manuals, proclaimed: "Good bark is the capital of the seringal."[173] More generally, the technicians followed a long line of scientific and agricultural "experts" who doubted the capacity of poor people to conserve natural resources.[174] Brazilian elites shared such beliefs, from nineteenth-century abolitionist Joaquim Nabuco to twentieth-century Amazonian historian Arthur Cezar Ferreira Reis, who charged that "evidently, the seringueiros, with the ruthless destruction that they caused, did not think about the future," contributing to the "impoverishment of regions where their disorderly offensive operated."[175] Counterposing wartime depictions of tapper predatoriness with contemporary environmentalist tributes to forest dwellers' model of sustainable development underscores how outsiders' understandings of the Amazon have shifted, in part, according to dominant actors' cognitive frameworks.[176]

In sum, amidst the serpentine trails, dense forests, and flooded river plains of the rubber properties, wartime reformers in Brazil and the United States sought to invent formal labor in the Amazon. Through standardized contracts and the rule of law, they aimed to remake *caboclo* and *bravo* "customers" into working-class citizens of Brazil endowed

with uniform rights and obligations. Through regulated markets, price controls, minimum wages, and job incentives, they hoped to regiment laborers and sustain productivity. Through novel tapping methods, they sought to impose universal standards for natural resource management.

The Battle for Hearts and Minds: The Media and the Message

Brazilian and U.S. officials employed a multimedia approach to stimulate popular interest in rubber production in the Amazon.[177] As the U.S. consul in Belém noted in June 1943: "A good public relations man or a publicity man could help the program immensely by pounding through every means available, especially through the press and radio, exactly what the Rubber Development Corporation is doing and how it plans to do it."[178] To be sure, there was a good deal that needed to be "pounded." In early 1943, Axis radio broadcasts in Latin America denounced U.S. authorities for dragooning tappers and labeled Fordlândia a colonial fiefdom, but the seeds of division were not only sown by the enemy.[179] In the Amazon, merchants grumbled that the Rubber Development Corporation offered too low a price for rubber under the Washington Accords, undercut their business, and possessed fleeting interest in the raw rubber trade. Residents of Belém and Manaus griped that the arrival of the RDC, with two hundred American employees and an even greater (and less remunerated) Brazilian staff, sparked competition for labor and housing—including office space in the latter's famed opera house—while the influx of thousands of migrants exacerbated food shortages. Peasants attuned to socioenvironmental conditions in the forest shrugged at official demands for revamping lifestyles and open-ended promises of public assistance. Conservative Catholics feared that an invasion by American Protestant males would undermine church authority and traditional gender roles.[180] Brazilian authorities were leery that inter-American collaborative scientific research on rubber might benefit other countries in tropical America.[181] And all the while, the Vargas regime jockeyed to prevent the U.S. government from stealing its thunder in the March to the West.

In the United States, conservatives fumed over the misuse of taxpayer money in the Amazon. The RDC suspected that although the Vargas regime assumed full jurisdiction over the recruitment of labor and transport to the Amazon, the agency would "probably share the blame," should anything go wrong.[182] Officials at the OIAA muttered that "Brazilians, like all Latins, are ultra-sensitive and take offense when none is intended."[183] And then there were the day-to-day indiscretions of U.S.

government employees in the Amazon, such as an RDC administrative assistant who ranted that "we'll cut off a few of these God damned Brazilian heads," in the presence of local merchants who understood English; the nocturnal escapades of his fellow employee, arrested after a drunken row at several bordellos in Manaus's red light district; or the divorce of an American couple employed by the RDC after the woman became "infatuated" with a Brazilian administrator at the agency.[184] Small wonder the consul in Belém worried about how to win hearts and minds in Brazil.

The nature of U.S.-Brazilian collaboration in wartime propaganda has been well documented.[185] In Brazil, the Departamento de Imprensa e Propaganda (DIP) used mass media and censorship to popularize the Estado Novo's agenda.[186] In the United States, the OIAA produced documentary films conveying the sociocultural dimensions and technological and scientific achievements of the United States and Latin America; beamed radio broadcasts promoting inter-American alliance and the "American way of life"; worked with the United Press and Associated Press to publish favorable reports on the United States in the Latin American media and vice versa; convinced Hollywood to depict Latin American subjects in a positive light; provided pro-Allied newspapers in Latin America with subsidized shipment of newsprint; and published a glossy magazine in Spanish and Portuguese modeled after *Life* which was entitled *Em Guarda* in Brazil.[187] The OIAA office in Brazil, headed by coffee importer Berent Friele and a board composed of local representatives of American corporations, worked closely with the Brazilian media industries and the DIP, producing various print publications and over one hundred films in Portuguese, many covering the war effort in Brazil.[188]

The publicity for the Battle for Rubber mirrored these trends. The government information bureaus and the media of both nations, as well as the specialized agencies directly involved in the rubber campaign, made use of film, radio, newspapers, posters, and photography. In the United States, the OIAA regaled domestic audiences with *The Amazon Awakens* (1944), produced by Walt Disney Studios, which offered a triumphalist depiction of the rubber campaign and the modernization of the Amazon.[189] *Brazil at War* (1943), produced by the OIAA for U.S. newsreels, proclaimed: "a million and a half square miles of wild rubber trees in the friendly Amazon basin is again being tapped to supply the needs of the United Nations. Brazil's production of rubber alone may prove to be a decisive factor in winning this war."[190] And the RDC consistently sought to impress U.S. audiences with the magnitude of its mission in the Amazon.

When *National Geographic* agreed to publish only two of the Amazonian prints by RDC photographer Francis Joannini, due to the "uninteresting choice of subject matter and unimaginative arrangement," a government memorandum suggested a new checklist: "get action in all pictures," "avoid static, purely scenic shots," "concentrate on foreground figures, more emphasis on people," "keep crowds of curious nationals from surrounding objects photographed or otherwise clogging photograph."[191]

In Brazil, the OIAA collaborated with Vargas's propaganda department on publicity material for the rubber campaign, including the production of a 35 mm film entitled *Borracha para a vitória* (*Rubber for Victory*), released in August 1943 for distribution in theaters nationwide.[192] The OIAA also worked with the Rubber Development Corporation to co-ordinate publicity in Brazil. For the Amazon and the northeast, the RDC produced handbills, posters, and news articles announcing the prices for rubber, the terms and costs for tapping supplies, and the availability of antimalarial medication. It also published instructional tapping literature for distribution through relevant Brazilian channels.[193] To spread the word among northeastern and Amazon populations, marked by high rates of illiteracy, geographic isolation, and mistrust of state officials, publicists relied heavily on audiovisual materials. One OIAA poster, for example, showed a diminutive, panicky Hitler being overrun by an enormous tire—although the caption, "Esborracha-o com borracha!" ("Rub him out with rubber!"), added certain oomph (see figure 3.7). Similarly, the OIAA's monthly publication, *No Front da Borracha (On the Rubber Front)*, featured on one of its covers a Nazi octopus stabbed by a tapper's knife.[194] Rubber Reserve printed illustrated booklets and pamphlets, including 20,000 copies of *Dona Gota Borracha*, which recounted the journey of "Miss Rubber Drop" from tree trunk to heavy artillery tire, and was distributed by the Brazilian government's propaganda bureau.[195]

The use of newer technologies aimed at reaching mass audiences. In *Cinema, Aspirinas, Urubus* (2005), a feature film based upon the wartime experience of the director's great-uncle, radio broadcasts served to draw nordestinos to the Amazon.[196] In fact, in the 1940s, most poor sertanejos lacked radios, but broadcasts did reach a larger swath of the backland population.[197] A history of Limoeiro, Ceará, for example, notes that the radio at the Salão Freitas hangout "kept the popular classes well informed" through news broadcasts from the Ceará Radio Clube, the Rio-based stations, and even the BBC.[198] And traveling in August 1943 through the interior of the states of Ceará, Paraíba, and Rio Grande do Norte, an

Figure 3.7 The caption of this image called on tappers to "Rub him out with rubber." Like other wartime propaganda targeting tappers, it highlighted the transformation of droplets of latex into wartime materiel that would pulverize the Nazi enemy. *Source*: National Archives.

RDC official deemed radio broadcasts effective in recruiting labor to the Amazon.[199] In Amazonas, Álvaro Maia and the state's department of propaganda made regular use of the radio, while the Radio Clube of Pará broadcast its "rubber program" nightly.[200] The OIAA also arranged for 16 mm films to be screened in October 1944 in the towns of Manacaparu, Anamã, Codajás, and Coari on the Solimões River to an estimated 14,900 people, courtesy of the American Redemptorist Fathers, who transported the projector and a portable generator.[201] In presenting spectators with new forms of social interaction and reconfigurations of speed and time, the medium of the movie was also the message.[202]

The recruitment campaign, however, also enlisted old-fashioned power brokers in northern Brazil, such as town mayors, the press, philanthropic groups, military commanders and state police, and the Catholic Church

Figure 3.8 Procession of rubber "soldiers" in Fortaleza organized by SEMTA. The banners read: "More Tires for Victory" and "Bound for Amazonia, The Land of Plenty." *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

(see figure 3.8).[203] The latter had long partaken in public ceremonies, charitable works, drought relief, and political campaigns in Ceará.[204] Thus, in his pastoral letter of May 1942, Archbishop Antônio de Almeida Lustosa of Fortaleza instructed priests to counsel parishioners suffering under drought that Divine Providence "tempers our punishment suddenly with succor. . . . The *soldados da borracha* leave with every possible comfort. And it is the [government] plan to provide comfort to the family that he had once assisted."[205] In December 1942, SEMTA director Paulo Assis Ribeiro met with the papal nuncio to coordinate the church's role in recruitment efforts.[206] Father Helder Câmara, director of SEMTA's religious division, encouraged clergy throughout the northeast to promote Amazonian migration. (Among the preoccupations of Câmara, an earlier supporter of Brazil's fascist Integralist movement, was that U.S. Protestants were "eyeing the opportunity to infiltrate the Amazon."[207])

During 1943, Catholic newspapers in Ceará endorsed rubber tapping as the "greatest blessing of God" for nordestinos to support their children, admonishing that any father who failed to "fulfill this responsibility before the Creator was undeserving of the grace he had received and would have been better off if he had never possessed procreative faculties!"[208] And in backland towns and migrant camps, priests officiated at masses, ceremonies, and baptisms for rubber "soldiers" and their fami-

lies prior to departure for the Amazon.[209] The audience was not always deferential. In postwar testimonies, residents of Limoeiro recalled that one Sunday, as parishioners emerged from mass, Helder Câmara stood on a bench in the town square, exhorting: "I am not saying that you should go to Amazonas. I am saying, let us go to Amazonas, because I, too, will go with you." When Tabosa, a painter and the sole Communist in the town, heckled Câmara, the mayor had him arrested.[210] Documentation of the church's role in the Amazon is sparser. In 1943, João da Mata Amaral, the newly appointed bishop of Amazonas, told the U.S. consul of his intent to replace German and Italian clerics with Brazilians in the interior of the state, and expressed the church's support for the rubber campaign and concern for migrants' physical and spiritual well-being.[211] Wartime photographs of civic ceremonies often feature the bishop at the side of interventor Álvaro Maia.

Most wartime mediators of the Amazon had slight knowledge of the region that they sought to represent. The halcyon rendition of life on the seringal designed by Swiss immigrant artist Jean-Pierre Chabloz for one of SEMTA's recruitment posters, for example, had been gleaned from his brief, lone visit to Belém. The instructional tapping film undertaken by the Coordinator's Office and Rubber Development reveals similar dissonance between the images and realities of the Amazon.[212] Intent upon depicting rubber tapping as a large-scale, epic production, rather than a scattered operation among small groups of seringueiros in remote areas, the cameraman traveled to Acre, where he hired several seringueiros to band together to extract large quantities of rubber. Since his arrival also did not coincide with actual transport of the rubber by mule and raft, he had to pay to stage these scenes as well.[213] Ultimately, RDC technicians slammed the footage for showing seringueiros cutting from right to left, as was customary in the Amazon, rather than the reverse, as practiced in Asia. The film was apparently never completed.[214]

The relevance of campaign propaganda to the wartime experiences of migrants and tappers will be analyzed further in the subsequent two chapters. We might point out here that the historian's conundrum of gauging cultural reception haunted wartime bureaucrats as well. In reporting on the public response to film screenings in Amazon towns, for example, Mabel Gustin noted that "everyone recognized Hitler and enjoyed heckling him whenever he appeared" in Walt Disney's animated cartoon, *Der Fuehrer's Face*, although she suspected that the audience did not understand the entire film.[215] A number of rubber technicians

also claimed that tappers welcomed patriotic pep talks and the distribution of propaganda literature.[216] From the Middle Amazon, technician Moacyr B. de Mello reported that "whenever we mentioned the amount of rubber needed to build a bomber (and we mentioned this wherever we stopped) the reaction was instantaneous and a crowd would gather seeking further information. Luckily we had a list of the amounts needed for a medium tank, a battleship and a gas mask!" And distribution of the OIAA magazine *Em Guarda*—with its "pictures of airplanes, tanks and trucks with their rubber parts plainly visible"—reportedly could not keep up with demand: at a meeting place of seringueiros, for example, an RDC technician found some old copies of *Em Guarda* whose dog-eared condition suggested that they had passed through many hands. Other observers scoffed, however, that tappers used propaganda material "mainly to adorn their bare walls," and that "wallpaper would stimulate greater interest."[217] In a similar vein, Mabel Gustin disparaged river dwellers' lack of decorum during the film screenings, exclaiming: "It is difficult for us to believe these things, but after traveling in the interior, you realize what children these people are."[218]

It is fair to surmise that most nordestinos bound for the Amazon were not seduced by patriotic appeals or government promises. Along with other workers mobilized for special wartime labor in the Americas, whether the Mexican bracero or Rosie the Riveter, northeastern migrants pursued economic opportunities through networks of kin and community that had been shaped by historical patterns and cultural norms.[219] As for long-time forest residents, the observation of one RDC technician seems rather apt: "They regard us tourists or city folks with a certain amount of pitying disdain. Outsiders might have luxurious automobiles or big launches but when they get out in the country they invariably make some awfully funny and foolish mistakes. . . . It is just a constant source of amazement to them how anyone who can't even find his way around ever managed to get enough money or had enough sense to get himself food and drink, much less an automobile or a launch." Such errors, he concluded, "only made the natives question the authenticity if not the veracity of all the statements we make."[220]

Unlike laborers in other extractive industries, such as mining, Amazonian gatherers enjoyed unusual autonomy and mobility in their work, even if geographic dispersal bedeviled collective organization.[221] Thus,

during the great rubber boom, bosses forged vertical bonds through credit to coax production while tappers wedded the trade in forest commodities with varied subsistence patterns. Tensions strained commercial relationships in which bosses routinely gouged and short-changed their "customers," while workers tempered abuse through myriad forms of evasion and noncompliance. In the interwar doldrums, credit-strapped bosses struggled to secure labor and sustain rubber production as tappers migrated downriver and turned to subsistence and other extractive economies.

To increase wartime rubber output, Brazilian and U.S. authorities endeavored to change the nature and meaning of work in the Amazon forest. While authorities from North and South America may have bickered over the profile of the new Amazonian worker—the former favoring unaccompanied men to tap rubber, and the latter, family colonization—both envisioned remaking (human) nature in the Amazon. The institution of standard labor contracts sought to recruit migrants, regiment production, circumscribe worker autonomy, and curb employer abuse. Tappers received promises of set returns and price controls on consumer goods, access to health care, and the right to labor mediation. Bosses obtained guarantees of subsidized labor and supplies and a regimented workforce. To mobilize far-flung populations with limited insertion in the market economy, a high illiteracy rate, and spotty identification with the nation-state, government officials counted on diverse media and social actors to broadcast masculinist ideals of adventure, social mobility, and patriotic service.

The publicity blitz surrounding National Rubber Month in June 1943 encapsulates the image-making intrinsic to such efforts to refashion the Amazon. The brainchild of RDC officials and advertising executives from the J. Walter Thompson Agency, National Rubber Month had been adapted from the nationwide U.S. scavenger hunt of the previous year. The Brazilian campaign employed public spectacle, contests, and media broadcasts to prod tappers to increase production and city dwellers to recycle scrap.[222] In Fortaleza, the primary transshipment point for northeastern migrants to Amazonia, the state of Ceará's Department of Propaganda organized a lavish parade of "rubber soldiers," who were flanked by high school students and boy scouts, and saluted by Brazilian government officials and members of the U.S. and British diplomatic corps.[223] In Pará, a group of university students sailed upriver on the "caravan of victory" to rally with tappers and bosses in the major rubber-producing

counties.[224] In Manaus, the Trade Association of Amazonas (ACA) announced a yearlong tapping competition to "ensure rubber for our army and armies of the other nations that are fighting against Germany and Italy." Each of the top rubber producers in the state's twenty-eight counties would be awarded CR$1,000, and an all-expense-paid fifteen-day visit to Manaus; the top five producers would receive a bonus of CR$1,000 each, and the grand prize winner an additional CR$2,000.[225] As a binational undertaking, National Rubber Month also reflected deft diplomatic maneuvers. Lest Brazilians lose sight of the broader significance of the rubber program, in vetting the commemoration, Vargas insisted that footage of his 1940 visit to the Amazon and his historic speech inaugurate the month's festivities "so as to show that he was the instigator of the program for the 'rebirth' and development of the Amazon Basin and Mato Grosso . . . opening up now one of the most fertile and promising Hinterlands to systematic exploration."[226]

While Brazilian and U.S. publicists did not invent images of the Amazon from whole cloth, we might underscore some of the wartime campaign's (mis)representations. In a society where credit sustained livelihoods, reformers denounced debt merchandising as unmitigated exploitation. Where noncapitalist modes of production reigned on the rubber properties, progressives envisioned the triumph of wage labor. Where the rule of law was elusive, bureaucrats and politicians trumpeted workers' new-found rights. Where few achieved social mobility, boosters promised windfall profits. Where variability marked forest ecosystems, outsiders yearned for standardization and predictability. And in a region that had become (in current-day parlance) significantly "internationalized," the Vargas and Roosevelt administrations labored to uphold the semblance of Brazilian national sovereignty. Such discrepancies suggest less the calculated duplicity of government officials than an urge to conceal their ignorance or impotence regarding the Amazon, and their condescension toward local practices and systems of knowledge. They also reveal that behind the efforts to save the Amazon often lies the impulse merely to wish away its realities.

Political change, of course, requires bold policy initiatives, but the wartime campaign demonstrates how outsiders have long imagined and represented the Amazon as a region transformable by fiat or fancy. Seringais did not even vaguely resemble coffee plantations. The former's trees were scattered over vast forests; their sinuous trails might become overgrown after heavy rains and during the months when they were not used

for gathering rubber; and their trading posts perched atop "ports" often consisted of a staircase carved into a steep river bank leading to a rudimentary platform made of tree trunks.[227] Methods of collecting rubber, social conditions and geographic distances in the Amazon, and the ineffectiveness of labor inspection by the regional delegation of the federal labor ministry and the labor courts (particularly in comparison to the São Paulo Labor Department's staff of one hundred inspectors) all served to undermine wartime visions of regional transformation.[228] Similarly, Asian tapping methods could hardly appeal to seringueiros when the Jebong was less suited than the Amazon knife for tapping old, mistreated trees, or when tappers' eyesight had become so debilitated by smoked ball production that they needed to rely on its familiar feel. Not to mention that tappers laboring under exploitative conditions might hardly see a new kind of knife as their panacea.[229] Bosses and tappers instead would rely on time-tested methods of control and negotiation.

Although the wartime campaign failed to transform modes of production and exchange in the Amazon, revisionist accounts fall into different traps in evoking lives and landscapes wasted by dictatorial wile.[230] We might reconsider indictments of Vargas's demagoguery when binational accords with the United States set the parameters for Brazilian public policies in the Amazon. We might question the dismissal of Brazilian wartime nationalism as an elite manipulation devoid of popular underpinnings.[231] We might challenge, as I explore in the subsequent chapter, tales of nordestino enticement to the Amazon that are belied by migrants' historical expectations and experiences. And we need not trivialize endeavors to forge citizenship in the forest when the Vargas regime's formalization of tapper rights and obligations, backed by New Deal internationalists, represented a significant counterpunch and historical precedent. Contemporary defense of the social rights of "traditional peoples" in the Amazon did not originate with the Catholic Church and foreign environmentalists amidst increased social conflict and deforestation in the 1970s and 1980s. Their legal foundations date back to the Brazilian-American wartime alliance and the efforts of welfare states to remake nature, work, and politics in the forest.

CHAPTER 4

THE ENVIRONMENT OF NORTHEASTERN MIGRATION TO THE AMAZON

Landscapes, Labor, and Love

Between 1941 and 1945, the Brazilian government transported 54,972 migrants to the Amazon in the largest state-subsidized domestic transfer of free labor in the nation's history.[1] According to the December 1945 report of the Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia (CAETA), 34,423 migrants came to the Amazon between 1943 and 1945: 10,123 men, brought by the agency's predecessor, SEMTA, between March and September 1943; and another 16,235 men and 8,065 women between October 1943 and April 1945.[2] The Departamento Nacional de Imigração (DNI) claimed to have relocated another 20,549 individuals in family units between 1941 and 1943. These official tallies exclude "spontaneous," or nonsubsidized, migration, nor does "transport to the Amazon" reveal much about migrants' precise destinations or destinies.

During the Brazilian Constituent Assembly of 1946, convened in the wake of the Estado Novo, a brouhaha erupted over the fate of the wartime migrants. Congressmen from several northeastern states alleged that 23,000 of their compatriots, lured by the Vargas dictatorship's get-rich-quick schemes and promises of state assistance, were "dead or lost" in the forest.[3] As Ceará congressman and reporter Paulo Sasarate charged: "The Estado Novo propaganda filled the Nordestino with fantasies of all sorts and made him believe in so many claims and promises that even we journalists, not

just the *sertanejos*, let ourselves be deceived by that colossal sweet talk." Amidst lurid press coverage, the Congress conducted a special parliamentary inquest between July and September of 1946 into the Battle for Rubber.[4] For decades, the accusations have stuck. In 2000, historian Marco Antonio Villa argued that during a devastating wartime drought in the northeastern backlands, the Vargas regime had its "hands free to lead as it wished the workers to Amazonia."[5] In 2006, the *New York Times* contended that the Brazilian government had "dragooned" labor for the rubber campaign.[6] And migrants have bewailed the siren song of official propaganda to journalists, documentary filmmakers, and on websites.[7]

Since nordestinos were critical in the making of the Amazon, this chapter revisits wartime migration to the region. In the annals of migration, detractors often blame unscrupulous recruiters for hoodwinking peasants, draining local labor, and unleashing moral disaster.[8] Indeed, since the nineteenth century, prominent Cearenses denounced the enticers who entrapped their compatriots in the Amazon forest.[9] Alternatively, commentators have cast northeastern migration to the Amazon as an atavistic instinct.[10] In *Mobilidade, Caráter e Região* (1959), Gonçalves Fernandes argued that nordestinos' wartime get-up-and-go derived from the "very mental structure" that they had inherited from their peripatetic Portuguese and indigenous ancestors, which propelled them to the Amazon to relive ancestral heroism.[11] Whether glossed as coercive, guileful, or instinctual, northeastern migration never emerges as a mechanism of household reproduction, a form of protest, a personal decision, or a transformative process for peoples and places.[12] Rather, the backlands of northeastern Brazil, as historian Durval de Albuquerque notes, has been represented as "space without history, hostile to change."[13] So too has the Amazon.[14]

This chapter situates wartime relocation from the northeast to the Amazon in the political economies, microsocial networks, and interlocking histories of these regions rather than in the realms of dictatorial treachery and peasant gullibility. Focusing on Ceará, the northeastern state that furnished the preponderant number of wartime migrants to the Amazon, I analyze how longstanding patterns of inequitable land distribution collided with rapid demographic growth, a rise in agroexports, and a crisis in smallholding. A drought in 1942–43 and the steep wartime increase in the cost of living exacerbated deep-seated social inequalities. Thousands relocated to southern Brazil, but with a new rubber boom and an expanding labor market, the Amazon beckoned as well—an option

sweetened by the offer of subsidized transport with per diem. Nordestinos' decisions to migrate to the Amazon were shaped by diverse factors: environmental disaster, socioeconomic status, accessibility to information and transportation, age, gender, and health.

The deep historical ties linking Ceará and the Amazon further nurtured a distinct set of historical experiences and social expectations for local households and communities. Between 1870 and 1910, during the great rubber boom, hundreds of thousands of Cearenses and other nordestinos had migrated to the Amazon.[15] Through the trail of financial remittances, the first-hand accounts of returnees (*paroaras*), the verse of popular poets, and the lore of families and communities, images of the Amazon long circulated in the northeast outside of official institutional channels. Thus, for some wartime migrants, "the Amazon"—or, more precisely, "the north" or "Amazonas," in the local parlance of the northeast—conjured rubber tapping, or remuneration and refuge of any kind. Others had a specific geographic region or property in mind. Many were poor, younger men, but the demographic pool was not homogeneous, and individuals possessed varied resources and motives in embarking for the valley during World War II. Although some migrants envisioned a long-term stay, most imagined a brief sojourn. "I came to earn money on the seringal and then to return home," one new arrival in Manaus in 1943 noted. "I came to get some change to buy a pump for my banana trees," stated another; "I will go back when fate allows, and luck as well," remarked his colleague.[16]

As historian José Moya notes, migrants respond to larger macrostructural forces over which they have little control, but in the process they become active participants in the shaping of history.[17] Impelled by global warfare, social inequalities, and family dramas, northeastern migrants struggled for decent work, fair pay, or a plot of land in the Amazon. Migrants were neither dupes nor passive victims but agents of change in their sending and receiving communities. Their varied appropriation of Amazonian resources served to shape the nature of the region.

The Political Economy and Ecology of Wartime Drought

In just a few words, Joaquim Moreira de Souza recounted in 1998 why he had trekked thousands of miles as a teenager from his home in Ceará's Jaguaribe Valley to the Amazon during World War II: "Drought nudged me along."[18] Drought long afflicted a large part of the agricultural and pastoral pursuits of the northeastern interior (particularly in the states of

Ceará, Rio Grande do Norte, Paraíba, and Pernambuco), occurring at random intervals (averaging one in ten years) and of varying duration (one to three years).[19] Although migrants often blame climatic adversity for their odysseys, drought may function as well in such testimonies as shorthand for the larger, punishing socioeconomic forces over which they likewise had little control, or as a narrative shield for family intrigues too intimate to affirm publicly. The misery wrought by drought originates anyway in the political as much as the natural landscape: like other "natural" disasters, drought must be understood as a social phenomenon, mediated by existing political, socioeconomic, and cultural networks, in which climatic conditions exacerbate deep social inequalities.[20] Put another way, drought does not kill people or force them to leave their homes: hunger and disease do. This in turn raises broader questions about unequal access to food, water, credit, transportation, medical care, and government assistance in weathering the effects of drought. Drought migration to the Amazon during World War II must be assessed in the context of the differential impact of environmental disaster on backland populations, the diverse political strategies by Cearense elites and federal officials to manage social crisis, and the constrained options of the rural poor in coping with both privation and opportunity.

In 1940, 77 percent of Ceará's population of 2.1 million was rural, and over 78 percent of the state's population illiterate.[21] Like neighboring states in northeastern Brazil, Ceará suffered from a paucity of schools, hospitals, industry, and skilled labor.[22] The extraction of xerophilous plants such as carnauba palm (wax), oiticica (oil), castor seed (oil), and caroá cactus (hemplike fiber) complemented cotton as the state's leading export commodities, which were controlled by a small group of larger landowners. Most agriculturists were subsistence farmers, whether smallholders or sharecroppers, although peasant households might also engage in cultivation or gathering of a cash crop.[23] The family labor of peasant households—drawing upon the physical strength of all able-bodied members; extensive knowledge of crops, soils, and cyclical seasonal patterns; and utilization of local flora and fauna spread over a range of microenvironments—sustained the backlands population (see map 4.1).[24]

The 1940 census data reveal the widespread poverty and social inequalities in Ceará (see table 4.1). Properties over 100 hectares, which comprised less than 20 percent of total landholdings, controlled over 76 percent of the land. And while many small farmers maintained direct

Map 4.1 Ceará

access to the means of production, rapid demographic growth strained family units. From 1920 to 1940, the population of Ceará increased from 1,319,228 to 2,091,032, nearly 32 percent of whom were under the age of ten.[25]

With an agricultural sector largely devoid of irrigation, machinery, inputs, pesticides, and storage facilities, rain acquired supreme importance for peasant households and the broader economic life of Ceará.[26] Newspapers dedicated special reports to rainfall. Rural dwellers entreated patron saints for water. And popular lore held that in the absence of sufficient rain by St. Joseph's Day on March 19, subsistence farmers had to act, because crops would fail to mature before the onset of the dry season in June.[27]

Table 4.1
Land Tenure Patterns in Ceará in 1940

SIZE OF LANDHOLDINGS IN CEARÁ IN 1940 (HECTARES)	PERCENTAGE OF RURAL PROPERTIES	PERCENTAGE OF AREA COVERED
0–1.9	5.18	0.05
2–9.9	18.48	1.07
10–99.9	55.89	22.11
100–999.9	19.19	51.24
Over 1,000	0.55[1]	25.53

Source: Anthony Hall, *Drought and Irrigation in North-East Brazil*, 34.
[1]The total does not add up to 100 percent due to rounding of numbers.

Ceará experienced drought during 1941 and 1942, and a partial drought in 1943.[28] By April 1942, tens of thousands of smallholders and sharecroppers had lost their crops and livestock, and scores of drought-related deaths had occurred, primarily of children.[29] According to the state's secretary of agriculture and the director of public works, twenty-five counties faced a calamity, with droves of ruined farmers and their families on the move in search of assistance.[30] In November 1942, U.S. observers estimated that 300,000 people had been affected by the drought in Ceará, albeit in varying degrees; approximately 100,000 concentrated in the vicinity of small towns, living from occasional jobs and begging, while 18,000 men (supporting 80,000 people) were working on public road construction.[31] Thousands of *flagelados*, or drought evacuees, congregated near commercial establishments, churches, and municipal offices in backland hamlets in search of food, work, or alms, overwhelming local resources.[32] Francisco Menezes Pimentel, the federally appointed governor in Ceará, pressed the Vargas administration to construct public works in the region, but also endorsed state-subsidized transport to the Amazon as a measure for drought relief.[33]

The history of drought in the Brazilian northeast and the efforts to combat it are well documented.[34] Covering a heterogeneous region of some 650,000 square kilometers, the sertão of northeastern Brazil contains drought-free elevated and mountainous areas, where rainfall is much higher than average in the region, as well as six major river systems. The *caatinga*, or semi-arid region of the sertão, starts in the valley-sides and extends over the surrounding hills and is characterized by xero-

philous vegetation, such as cacti, shrubs, and small trees.[35] A long dry season from June to December, high temperatures, thin surface soils, rapid evaporation, and sparse vegetation all contribute to the severity of drought.[36]

Until the late eighteenth and early nineteenth centuries, the sertão attracted few Portuguese settlers given the region's harsh climate, challenging soils, and hostile Indians. During the late colonial period, however, settlers began to push inland, establishing large cattle ranches to supply the coastal plantations with meat and cattle by-products, while a mid-nineteenth-century cotton boom, favored by the plunge in U.S. exports during the Civil War, attracted large numbers of small farmers.[37] As a cattle and cash-crop economy took hold in the sertão, a variety of land-use arrangements emerged. Landowners granted tenant farmers and sharecroppers the right to occupy land in return for payment in cash, or more typically a stipulated share of the crop, while a stratum of workers earned petty wages for random chores performed on estates. But many small landowners had their own plots where their families mixed subsistence farming with small cash-crop production, albeit at substantial risk in a drought-prone region.[38]

Euclides da Cunha pithily described the drought cycles as "an eternal and monotonous novelty" rousing the incorrigible sentimentalism of the national soul, but whose intermittence undermined enduring solutions.[39] Following the great drought of 1877–79—in which hunger and epidemic disease claimed as much as one half of Ceará's population of one million in Brazil's worst "natural" disaster to date—the federal government undertook the first of many studies to prevent future catastrophes.[40] The Inspetoria Federal de Obras Contra as Secas (IFOCS), created in 1909, endorsed technical solutions to solve the problems of northeastern drought—creation of dams and storage reservoirs (*açudes*), establishment of meteorological and pluviometric stations, geological surveys, and construction of railroads and roads to assist in future relief efforts.[41]

Under Vargas, the federal government greatly expanded public works in the northeastern sertão. Between 1931 and 1944, the regime oversaw the construction of thirty public reservoirs, while an increase in the number of private (state-subsidized) açudes boosted water storage capacity more than tenfold.[42] The northeast's road network also grew by over six thousand kilometers during this same period.[43] Although technological fixes diminished drought's lethality, they failed to stem its disparate impact on backland populations. State-funded reservoirs and dams, con-

structed without simultaneous preparation of an irrigation network (which would have required expropriation of estates), principally benefited large cash crop producers and a handful of adjacent smallholders, while new roads often rewarded influential landowners.[44] As Manoel Taigy de Queiroz Mello of Taperoá, Paraíba, wrote to Vargas in February 1944: "Roads only serve to 'richen' (*enricar*) truck owners, reservoirs are very good for the mayors and their cronies, and even so need rain to fill up." After three years of drought, his neighbors resembled "veritable skeletons," forced to beg or steal barbed wire to sell for food.[45]

The plight of Mello's neighbors was sadly familiar. Sharecroppers and smallholders—hobbled by restricted access to water, lack of storage facilities, chronic indebtedness, limited market insertion, and precarious land claims—were far likelier to be devastated by drought than the owners of cattle herds or plantations of cotton and carnauba palm. With minimal cash income garnered from the sale of their produce or from wage payments, smallholders depended primarily on meager stocks of staple foods to survive droughts, yet these precisely were most hard hit.[46] Indeed, the risks and uncertainties bearing upon the northeastern poor's preparedness for environmental calamity flowed from the everyday conditions of work and social security that consumed their energies, or what one social scientist has termed "the myth of ordinary life."[47] At the mercy of merchant capital for loans and marketing of goods, small farmers rarely had the motivation or the means to invest in input or technology, even under "normal conditions."[48] A 1939 study of forty-six families living at the IFOCS agricultural post in São Gonçalo, Paraíba, for example, found an illiteracy rate of 75 percent for the population over ten, and an infant mortality rate of 31 percent for children less than one year old. All of the families had debt ranging from 50$00 to 250$000 mil-réis, representing a deficit of one to two months of work.[49] "Living badly and dressing worse," recalled a local historian of Quixadá, "when one got sick, the remedy was to search for medicinal plants. Only rarely could someone pay for a doctor or medicine from the pharmacy."[50]

Large landowners, more directly linked to the market economy, could rely on cash and other liquid assets in times of need, while their ability to store staples poised them to take advantage of spikes in food prices.[51] They also brokered considerable political power across the northeastern backlands: in Ceará, prominent clans included the Feitosas of Inhamuns, the Montes of Sobral, the Queiroz of Quixadá, the Gouveias of Iguatu, and the Távoras of Jaguaribe.[52]

Table 4.2
Production of Cotton in Ceará in Kilograms, 1937–1944

YEAR	NUMBER OF KG
1937–38	30,645,000
1938–39	27,692,200
1939–40	27,745,000
1940–41	31,009,000
1941–42	19,633,000
1942–43	8,203,000
1943–44	12,298,000
1944	25,000,000 (estimated)

Source: Walter W. Hoffmann, Ceará Cotton, Fortaleza, August 10, 1944, NA, RG 166, Foreign Agricultural Service, Narrative Reports (1942–45), Brazil: Cooperatives-Cotton, Box 56.

The commodity booms of the 1930s and early 1940s most likely deepened social inequalities in Ceará and the vulnerability of the poor to drought and famine. Cotton was a case in point. In 1938–39, Brazil's northeast produced 122,000 tons of cotton for export primarily to Europe and Japan.[53] It was grown on large plantations such as São João, comprising alluvial land within reach of water channeled from Quixadá's Cedro reservoir, and held by an individual "whose family has owned property in Ceará for generations and has been influential in domestic affairs."[54] But cotton also served as the "poor man's crop," cultivated by tens of thousands of smallholders and sharecroppers on plots ranging from twenty-five to sixty hectares under primitive methods.[55] With drought halving cotton production in Ceará from the previous year (see table 4.2), the U.S. consul noted in November 1942: "At what is generally the height of the cotton ginning season many gins in the sertão region are already preparing to close down for the year. The poorer farmers and laborers in this district are in desperate straits, due to the lack of employment and have no means of providing for themselves and their families."[56]

The boom in carnauba wax in the late 1930s and early 1940s engendered similar socioeconomic disparities. Carnauba wax served as a base for polishes and in the manufacture of lubricants and phonograph records, but its price more than doubled between 1938 and 1944 when its application as a surface wax was found to increase the speed of air-

planes.[57] Carnauba led Ceará's exports by 1939, bringing the trappings of modernity to towns in the Jaguaribe valley, the state's main producing region, and involving some 20 to 30 percent of the state's population.[58] Extracted from the leaves of palm trees near the principal rivers of the northeast, carnauba wax was compromised by the drought of 1942, compounding the trade's uneven dividends. Most palm "cutters" earned less than two cruzeiros daily in a harvest that lasted less than two months at the end of the dry season. During the winter months, thousands worked on small agricultural clearings, sought temporary employment in town, and assumed credit advances from landowners and merchants to acquire food, clothing, and other incidentals.[59] On the other hand, João Ivo Xavier and other "donos das várzeas" (owners of the river banks where the carnauba palm grew), were well equipped to withstand drought. Xavier, a former mayor of Russas, owned a large carnauba property, a mill for refining the wax, and an "enchanting" country house with an electrical generator; like other wealthy landowners in the 1940s, he resided in the capital, where he could educate his large brood.[60]

The rise in northeastern agroexports provoked a drop in food crop production. In a 1942 survey of rural Ceará, engineer Dulphe Pinheiro Machado noted that agriculturists in the Jaguaribe valley had profited from the extractive industries of carnauba and oiticica prior to the drought.[61] The latter commodity, a pecan-sized nut of the large evergreens found in the grasslands bordering the Jaguaribe and other rivers in the sertão, supplied the surging U.S. demand for drying oils following the disruption in traditional Asian exports.[62] Yet whereas Ceará exported 24 million kilos of manioc flour in the 1920s, the state imported 84 million kilos during the following decade.[63] As in the cataclysmic nineteenth-century drought that triggered Brazil's "late Victorian Holocaust," the pre-war expansion of agroexports in the northeastern backlands compromised food production and security (see table 4.3).[64]

With the cost of living in Ceará tripling in 1942 due to reduced food supplies and commercial speculation on imports, the U.S. vice consul in Fortaleza requested a raise from the secretary of state.[65] But for the rural poor, who had slight chance of securing credit or getting a raise, drought meant getting by on perhaps one meal per day of farinha and *piabá* (a goldfish-sized fish eaten dried), and a desperate search for work or assistance.[66] As anthropologist Charles Wagley, who oversaw the Amazon migration program for the OIAA, noted on a five-day field trip through eastern Ceará and western Paraíba in November 1942, the problem was not

Table 4.3
Crop Production in Ceará in Pounds, 1940–1944

CROP	1940	1941	1942	1943	1944
Rice	54,238,140	40,626,696	33,000,000	17,600,000	26,243,000
Corn	249,301,536	197,016,468	111,012,000	123,200,000	275,000,000
Beans	117,685,688	114,977,280	29,040,000	33,300,000	61,146,400
Manioc	953,431,600	857,054,000	792,200,000	880,000,000	1,100,000
Cotton	35,200,000	68,200,000	41,905,600	48,400,000	55,000,000
Carnauba	7,696,359	7,738,654	4,511,712	11,000,000	9,900,000

Source: S. B. Fenne, chief of Region IV, Division of Food and Nutrition, OCIAA, "Ceará," July 25, 1944, NA, RG 84, Foreign Service Posts of the Department of State, Brazil, Fortaleza Consulate, 1944.

the absence of food per se, since imported food was found in all small stores, but the lack of money to purchase it.[67] Indeed, in a desperate telegram to Vargas in 1942, agriculturist Joaquim Alves de Freitas denounced the socioeconomic factors that had weaponized drought, assailing the "magnate and usurer" Antonio Freitas Nobre for rejecting new terms for loan repayment and seizing his only property "below cost."[68] Another ruined farmer, José Pires Ferreira, implored Vargas to provide for three sickles, three axes, and three hoes: "I am a worker. We have had 3 years of draught [*sic*] in Ceará and my family and I are now in mizery [*sic*]; winter is arriving and I don't have one tool left. I have turned to the state *interventor* Dr. M. Pimentel and have not received a reply."[69] Ferreira had reached rock bottom: small farmers sold their tools and livestock typically as a last recourse during drought, only to fetch below-market prices.

In a primarily rural state such as Ceará, drought inflicted suffering across the board. Rivers and smaller reservoirs dried up, crops withered, livestock perished, and state revenues and commercial credit contracted. But the impact of drought, mediated by socioeconomic and political factors, rendered starkly differential options and outcomes for residents of Ceará. From her ranch in Tauá, Dondon Feitosa wrote a friend on July 10, 1942: "Here, aside from a situation of absurd shortages, we are living through a terrible drought due to the great lack [of rainfall]." But, she noted, "our friends remain firm, as if suffering has the capacity to unite us even further." As a member of the storied Feitosa clan—with one son in high school intent upon attending the military academy in Fortaleza and another living in the south of Brazil (whom she had just returned

from visiting)—Dondon could better afford to "stand firm" in the face of "absurd shortages."[70] She and her "friends" certainly would not have to suffer the indignities of begging in town, internment in concentration camps in Fortaleza, underpay on public works projects, or relocation to the Amazon as a method of drought relief. Feitosa's very ability to lament her plight in writing is in itself telling: a survey of fifty-four release forms of SEMTA, the Brazilian state agency entrusted with transporting nordestino men to the Amazon, reveals that twenty-eight of the prospective recruits could not even sign their name.[71] In this sense, although drought may have prompted wartime migration to the Amazon, its impact on backland populations was neither "natural" nor neutral.

Drought Migation: Peasant Strategies and Public Policies

Refugees from the 1942 drought, noted IFOCS engineer Paulo de Brito Guerra, showed a definite order of preference: they asked for land first, then employment, and "avoid begging whenever possible."[72] Burdened with the historical memory of drought, sertanejos developed their own understandings and methods for mitigating its effects. Many viewed drought as divine punishment for sin: faith gave meaning to human suffering, even if it failed to stem it, at least in this life.[73] They also drew upon experience with prior environmental calamities, most recently in 1915, 1919, and 1932. As a peasant strategy to cope with the effects of drought, wartime migration to the Amazon must be seen as a somewhat selective process, since most did not or could not make the long journey.

Wartime evacuees generally roamed closer to home than the Amazon to await the winter rain. They favored the humid enclaves and water reservoirs of the sertão, but these soon became overrun.[74] For example, over 5,000 people had planted gardens on damp soil at the Cedro reservoir—where in nondrought times there might be 2,800—forcing the caretaker to turn away new arrivals.[75] Public works provided another outlet: building roads and reservoirs in the backlands, these "anonymous heroes," in the words of an IFOCS engineer, deserved "a bronze statue in the Northeast. One in each State."[76] Such laborers were colloquially called *cassacos*: arriving at work sites toting young children in slings, they were said to resemble the small marsupials of the northeast. Others have contended that they were referred to as animals because they were treated that way.[77] Wielding pickaxes or shovels during the day and sleeping in hammocks and sacks near the job site at night, cassacos earned meager salaries for backbreaking labor—a mere 4 milréis per day (20 American

cents)—payable in scrip and redeemable with the unregulated purveyors of food and merchandise.[78] Yet notwithstanding miserable conditions, employment on public works failed to accommodate overwhelming demand.[79] Workers shipped by the mayor of Quixadá to one road-building project, for example, were turned away because 5,000 people had already enlisted.[80]

Evacuees also flocked to Fortaleza, Ceará's political and commercial center, and a hub for maritime and overland transport. By January 1943, an estimated 5,000 people in "terrible physical conditions" clustered in camps and public grounds in the capital.[81] Some had arrived by railroad, while another observer noted "long lines of countless 'flagelados' fleeing from their parched fields, [who] pitifully dragged themselves hundreds of kilometers towards Fortaleza, where they hoped to find some work or relief from their tribulations through public or private assistance."[82] Between 1930 and 1940, the population of Fortaleza had grown from 111,651 to 182,158, with the agroexport boom fueling the expansion of the city's public utilities and educational and cultural institutions.[83] But on his 1942 visit, Good Neighbor "ambassador" Waldo Frank noted that Fortaleza was "full of sertanejos driven in by thirst and starvation." In the town plaza, Frank observed one sertanejo in a broad straw hat, ragged shirt, and leather breeches, who went from bench to bench while his wife stood by with a baby in her arms. Accosting Frank, he pleaded: "My family is here from the sertão. We had to leave, and nothing was alive when we left. I need the fare to take us to Acre. There's work there in the seinguals [*sic*]." Frank offered the man "more than the average contribution" for a voyage of more than 3,000 miles.[84]

In an effort to expedite the "decongestion" of Fortaleza and backland towns and to fulfill the broader geopolitical aims of the Estado Novo, Governor Menezes Pimentel urged mayors to promote Amazon migration.[85] The archbishop likewise counseled parishioners to get up and go. And local newspapers cheered that a new rubber boom had Cearenses "getting ready to wash their horses again with beer and to light their cigarettes with 500 mil-réis bills."[86] By fall of 1942, state authorities in Ceará had begun coordinating with representatives of U.S. and Brazilian federal agencies the construction of migrant camps in Fortaleza and backland towns.[87] In Fortaleza, evacuees were put to work widening the access road to the city's port and building a migrant camp and hospital at Alagadiço to facilitate mass labor transfers to the Amazon.[88] Whereas the Brazilian government had relocated only 435 nordestinos to the Amazon

in April 1942, U.S. funding following the signature of the Washington Accords allowed the DNI to transport 14,484 persons by February 1943, of which slightly more than half were adult men.[89]

Given high-ranking Cearense officials' endorsement of Amazon migration, their postwar accusations that the Vargas regime had lured their countrymen to a jungle deathtrap smack of revisionism. Facing a public emergency, Ceará's leaders exhibited a mix of compassion and skittishness. In a society colored by paternalistic bonds and the moral dictates of Catholicism, Cearense elites mobilized to offer on-site assistance to the dispossessed.[90] In April 1942, for example, mayors and clerics of several towns beseeched Vargas for humanitarian aid and the construction of roads and reservoirs in the backlands.[91] The Catholic Church and its charitable organizations distributed alms, funded public works, and appealed to dioceses in southern Brazil.[92] Residents of the capital donated money, clothes, and even beds, while the Retailers Union of Fortaleza protested that "dispatching Cearense workers to Amazonia does not remedy the problem as it benefits only the few [physically] sound workers selected."[93] (To be sure, U.S. observers detected a substantial dose of self-interest among critics who demanded that the Brazilian government spend more money on local relief measures, thus securing "added extra works and added commerce."[94]) But the upheaval straining public order in the backlands and urban centers of Ceará also alarmed elites. Fortaleza dailies demonized evacuees as vectors of crime and epidemic, and stoked hysteria with reports of commandeering of trains and armed robbery in backland towns.[95] Incidents of "looting" of food—which historian Frederico de Castro Neves correctly views as less a spasmodic, chaotic response to hunger than a calculated measure by the rural poor to negotiate the defense of moral economy with backland elites and the state—led backland merchants to shutter their stores and mayors to panic.[96] Archbishop Antônio Lustosa denounced the segment of the poor "habituated to idleness, acquiring thousands of vices, and learning how to exploit the good faith of those from whom they ask help."[97] And droves of ragged peasants descending upon Ceará's political center subverted Vargas-era narratives of modernization and progress.[98]

Yet it is also misleading to portray nordestino migrants as having been dragooned or duped by government authorities. During his 1942 visit to Ceará, Dulphe Machado noted that emigration to Amazonia was the "anxiety" of the sertanejo.[99] Similarly, Archbishop Lustosa asserted that drought evacuees from Ceará and the neighboring states of Rio Grande do

Norte and Paraíba who came to Fortaleza "naturally seek the port where they might embark most easily for Amazonia."[100] Indeed, a Fortaleza newspaper reported in May 1942 that evacuees housed on the grounds of the Maritime Police opposed relocation to an inland camp because they feared losing their opportunity to embark at once from Ceará.[101] Conversely, the refusal of other sertanejos to migrate to the Amazon—because they purportedly feared being shipped off to the North African battlefront, "devoured by Indians," sold "for the weight of gold" in the Amazon, or parting from their "beloved mothers"—stemmed not only from wartime rumors (some of which were spread by anti-emigrationist municipal officials) or sentimentality. Rather, it suggests that longstanding northeastern jeremiads against the Amazon informed popular perceptions of the region.[102] In this sense, Cearense migration to the Amazon reflects the constrained options and measured calculations of the rural poor to cope with extreme privation.

Beyond Drought Evacuation in a Hemisphere on the Move

Natural disaster narratives have served to advance humanitarian and political interventions in the semi-arid northeastern backlands, but may also flatten the historical dimensions of out-migration. During the war, Ceará's economy was roiled not only by diminished harvests but also by disruptions in trade and transportation. With German attacks on the merchant marine, a naval blockade, and the dearth of commercial shipping hobbling cotton exports to trans-Atlantic markets and southern textile mills, only strategic war material purchased by the United States, such as carnauba wax and vegetable oils, fared well.[103] Ground transport also came to a crawl as locomotives of the Rede Viação Cearense suffered from overload, disrepair, and lack of replacement parts, and gasoline rationing limited road transportation.[104] Cotton and vegetable oil seeds filled warehouses in the interior, often taking up to six months to reach Fortaleza, only several hundred kilometers away.[105] Unable to dispose of their crops, producers from the state's rich agricultural southern regions could receive only one-tenth of the market price in the capital, or had to incur heavy expenses, interest payments, and the threat of deterioration if they opted to hold on to them for future sale.[106]

The wartime collapse of Ceará's transport system and export trade provoked a sharp rise in the cost of living, particularly in the north of the state, while profiteering compounded the woes of the poor population. In April 1943, for example, monthly expenses for a working-class family

of five in Fortaleza were more than quadruple the minimum wage of CR$150.[107] Male heads of household who joined the rubber campaign—including Antonio Moreira da Silva, Manoel Ferreira da Silva, and Antonio Batista de Souza, who identified themselves as "three fothers [*sic*] of families who are sining [*sic*] up with the Americans," and whose family members were "in great need"—had an average of four dependents; and since the recruitment agency only admitted men between the ages of 18 and 45, they conceivably stood to have more children in the future.[108] Thus, as Charles Wagley correctly noted, with a wage scale in Ceará of 3 to 4 cruzeiros per day, as opposed to 6 to 10 cruzeiros in Pará, and prices nearly equivalent in both states, many would be attracted to the opportunities in the Amazon "come rain or shine," particularly when they learned of the offer of free passage.[109] Since third-class fare on the Lloyd Brasileiro line from Fortaleza to Belém and Manaus cost 103$480 and 184$800, respectively, in 1939—or between one and three months' salary at four cruzeiros per day—ship passage represented a significant expense or credit advance for migrants.[110] (According to Amazonian merchants, it cost a total of 350$000 to transport a worker from the northeastern backlands to an upriver seringal.[111])

If low wages and the rising cost of living dimmed economic prospects in Ceará, the rubber boom and contemporaneous expansion of public works in the Amazon beckoned workers of all stripes. In August 1942, the Conselho de Imigração e Colonização complained that many "undesirable elements employed in petty urban trade" had migrated to the Amazon.[112] In Samuel Benchimol's 1942–43 study of fifty-five recently arrived nordestino migrants in Manaus, thirty identified themselves as agriculturists, eight as artisans, three as ranchers, two as cowboys, four as employees, two as businessmen, and six without a specific profession.[113] Among the twenty-two skilled northeastern laborers who relocated to Manaus in March 1943 to work for the Rubber Development Corporation were José Correia Lima, a mechanic whose garage had been closed due to the lack of private cars to service; Luiz Correia de Souza, a machine operator and IFOCS employee who complained of a meager salary; and Luis da Cunha Mendes, a college-educated accountant from Fortaleza who wanted higher wages to provide "greater comfort" for his wife and eleven children.[114] And in his study of Itaituba, Pará, Darrel Miller found that three of the four major merchants in the town had arrived from the northeast during World War II.[115]

Migration to the Amazon also served as a strategy for social mobility for

peasant households. José Carlos Ribeiro, a SESP physician, noted that as rural conditions stabilized in late 1943, families "in better conditions" than the first wave of drought evacuees came to the migrant camps "seeking to improve their lives" in the Amazon. They frequently sent forth "a small branch [of the family], often armed with capital collected from numerous relatives, as advance troops." After gathering information and even beginning to work in the Amazon, the migrant(s) "either returned home to serve as a guide for the rest of the family or wrote with the necessary instructions . . . to try their luck in another region." Thus, many migrants who arrived in Fortaleza demonstrated "a will to move on and a firm resolution to leave home," giving "precise indications right away as to where they intended to go."[116] Oral histories corroborate Ribeiro's report. When Clovis Barreto left his home in Tapuiará, Ceará, in 1943, his father, a muleteer, had already lost many animals to the drought. But Clovis also had a very specific destination in mind: at the behest of his mother, who had lived in Amazonas prior to marriage, he headed to his great-uncle's seringal on the Purus River to lay claim to an inheritance from his deceased grandparents. He would remain on the seringal until 1948, ultimately settling in Manaus.[117] Challenging dualistic typologies that have defined northeastern migration as motivated by either a search for food or a search for fortune, historical sociologist Lopes de Andrade has aptly noted: "The truth is both have occurred, simultaneously, since the beginning of colonization, with one ultimately taking predominance over the other."[118]

Indeed, northeastern migration in the early 1940s conformed to a hemispheric trend in which the production of war materials—organized by governments and encouraged by private employers—brought about significant dislocations in national and continental labor markets. The exodus of nordestinos to the Amazon occurred alongside the movement of Bolivians to tap rubber in the Beni; of Hondurans to rubber projects in Panama; of Peruvians to Bolivian mines; of Central Americans to the Canal Zone; of Anglophone Caribbeans to U.S. farms; and of Mexicans to work in U.S. agriculture, canneries, packing plants, and railroads. Throughout the Americas, inflation and ineffective price controls often eroded increased wartime wages.[119]

"A Free Ticket from Getúlio Vargas": Subsidized Transport in the Making of the Amazon

Cearense migrants were drawn to the wartime Amazon not only by so-called push and pull factors. In the 1930s, 640,000 people emigrated

Table 4.4
Migration of Nordestinos to São Paulo, 1941–1945

STATE	1941	1942	1943	1944	1945	TOTAL
Piauí	—	63	393	1,005	95	1,556
Maranhão	—	15	3	101	48	167
Ceará	616	3,846	2,074	4,441	3,010	13,987
R.G.d.Norte	147	600	129	423	137	1,436
Paraíba	126	530	200	935	146	1,937
Pernambuco	1,202	2,448	3,099	3,522	1,400	11,671
Sergipe	412	688	560	1,308	1,929	4,897
Alagoas	2,118	1,180	1,653	4,535	3,538	13,024
Bahia	8,847	4,556	6,467	19,147	7,757	46,774
Total	13,468	13,926	14,578	35,417	18,060	95,449

Source: Lopes de Andrade, *Forma e efeito das migrações do nordeste* (Paraíba: A União Editora, 1952), 17.

from the northeast, and another 940,000 in the 1940s, but most headed south.[120] Between 1934 and 1939, for example, approximately 212,000 nordestinos entered São Paulo—mainly from Bahia (151,236), and fewer from Ceará (5,195)—and even during the war (see table 4.4) spontaneous migration to São Paulo far outpaced directed flows to the Amazon.[121]

Moreover, while countless nordestinos may have dreamed of trying their luck in the Amazon, population transfers varied significantly by region. Wartime workers in Recife, the capital of Pernambuco, for example, expressed interest in the Amazon after learning of the rubber campaign through the local media, but fewer came than from Ceará.[122] But as Brazil's third largest city at the time, Recife had a modest industrial base, while drought refugees in southwest Pernambuco most likely trekked southward: from Petrolina, they could sail up the river to Pirapora, Minas Gerais, connect to the terminus of the Estrada de Ferro do Brasil, and obtain free passage to work in São Paulo agriculture.[123]

The greater availability of transport from Ceará to the Amazon, in conjunction with the social ties linking the regions, was decisive in contouring labor flows. Residents of Ceará and the abutting regions of Paraíba, Rio Grande do Norte, and (northern) Pernambuco could travel by truck, rail, or foot to Fortaleza or to backland camps to await transport to the Amazon. Indeed, Fortaleza's position as a maritime and overland trans-

Table 4.5
Migration of Families from Ceará to Amazon by Geographic Region, 1943

GEOGRAPHIC REGION	POPULATION	NUMBER OF MIGRANTS
Jaguaribe Valley	426,916	3,414
Serra Grande	537,868	304
Cariri	388,200	313
Central Zone	196,278	762
Coastal Region (Including Fortaleza)	551,951	2,144

Source: José Carlos Ribeiro, Relatório de 1943, SESP, Projeto de Migração, NA, RG 229, Records of the Department of Basic Economy, Health and Sanitation Division, Monthly Progress Reports of Field Party (E-143), Brazil, March–December 1943.

port hub explains its primacy as a shipment point. Thus, of the 15,030 unaccompanied male workers enlisted by June 1943 for the Amazon rubber campaign, the largest chunk (4,667) came from Fortaleza, as did a significant number of families.[124] Since government officials focused on head counts rather than life stories, the documentation does not indicate whether migrants from Fortaleza were predominantly recent arrivals or longer-term residents—although, for what it is worth, Amazonian bosses complained that many wartime arrivals to the rubber zones were not "from the interior" of Ceará but "coastline riffraff."[125]

Regional transportation networks also help to account for the large number of migrants from the Jaguaribe valley, who comprised nearly half of the 6,937 individuals transported by the DNI to the Amazon during the latter part of 1943 (see table 4.5). For example, Iguatu, located in the southern portion of the valley on the Fortaleza-Crato rail line at the junction of roads linking Ceará with neighboring states, netted 10,800 migrants for the Amazon between March and December 1944, or an average of 1,200 people per month.[126] Ceará's lone statewide highway, which ran from the southeast corner of the state to Fortaleza and on to the western border, also tapped the Jaguaribe valley.[127] Cars and trucks began to appear in the larger towns of the lower Jaguaribe in the late 1920s, and transportation to Fortaleza, including bus service, would lead a prominent economic historian of the state to assert "so long as the sertanejo was unaware of the beauties of Fortaleza and did not travel with ease and comfort in automobiles, he was tied to the countryside, raising and planting."[128] The "ease" and frequency of motorized travel in Ceará

should not be exaggerated—in 1945, there were only 764 automobiles, 659 trucks, and 194 buses in the state—but roads facilitated emigration to the Amazon, serving as a conduit for information and a thoroughfare to the capital.[129]

In 1998, Lourenço Canário da Silva, who emigrated from Aracoiaba during the war at the age of twenty, reminisced from his shack in Cruzeiro do Sul, Acre: "I won a ticket from Getúlio Vargas and in return I gave my life. Everything changed."[130] But Aracoiaba's location on the railway line of the Rede Viação Cearense certainly facilitated da Silva's voyage, as the alternative trajectory of Pedro Alberto de Lima Valverde from Santo Amaro da Purificação, Bahia, suggests. Valverde, a twenty-three-year-old army reservist, had been unemployed for one year—"not due to laziness as numerous writers have often said of Brazilians, but because I do not have anything to do here"—when he wrote to Vargas in January 1944. "I heard that the Rubber service, there in the Amazon region, is in need of labor," Valverde stated, requesting passage to join the campaign. Valverde did get a free ticket, but the rigmarole of coordinating the operations of various ministries to effectuate his circuitous itinerary from Bahia to the Amazon meant that he would be the exception to the rule.[131]

Health and Biotypes

Migrants to the Amazon were a select group in other ways. The Vargas regime barred migration on the basis of physical incapacity, subjecting potential recruits to extensive medical tests and vaccinations against smallpox, typhus, yellow fever, and tetanus (see figure 4.1).[132] As one newspaper headline announced: "Migration to the North: Only Sertanejos in Good Health Can Go."[133] The statistics on rejectees—roughly 10 percent of examinees according to monthly data for one camp in the northeast—are themselves quite revealing.[134] Of the 119 nordestinos turned down during the month of January 1944, for example, the largest single reason (46 cases) was "somatic hypoevolutism," or stunted growth, typically caused by malnutrition during fetal development and early childhood.[135]

During the mandatory health examinations, SEMTA medical personnel also conducted biotype studies, recording data on skin color, cranial measurement, hair type, nasal index, thoracic circumference, panniculus adiposus, and height. Indeed, by 1940 nearly 38,000 biotype studies had been conducted in Brazil for "military ends."[136] In line with the Lom-

Figure 4.1 Vaccination of northeastern migrants by SESP health officials. *Source*: National Archives.

brosian notion that physiognomy reflected personal character, the SEMTA manual instructed physicians that "from a biotypological viewpoint what must be analyzed is the relationship between the cranium and the face, the former as a representative element of the system of relation and the latter as a representative of the vegetative nervous system." It also urged doctors to undertake cranial measurements to identify "dolichocephalics," purportedly found among black populations of Africa but rarely in Brazil, and to classify hair by color and by type, whether straight, curly, wavy, or "kinky." For racial classification, the medical staff employed categories devised by anthropologist Edgar Roquette-Pinto, which consisted of *leucodermos* ("individuals of white, milky, or wheat-colored skin"); *faiodermos* ("brown skin," "mestiços of whites with blacks [*mulatos*]"); *melanodermos* ("black skin"); and *xantodermos* ("tanned skin, mestiços of whites with Indians").[137] Posters of nordestino biotypes designed by the director of SEMTA's publicity division (per physicians' guidelines) aimed to assist medical personnel with their work.[138] Needless to say, doctors most likely culled such "scientific" data without the consent or the understanding of their naked subjects.

If medical exams determined who could go to the Amazon, bioty-

pology offered a "scientific" explanation why they should. Anthropologist Lúcia Arrais Morales has argued that SEMTA's biotype studies aimed to whiten the Amazon, but none of the extant medical records list race as the basis for exclusion, which typically owed to physical incapacity or, less frequently, an enlistee's change of heart.[139] And while Brazilian elites did hope to whiten the Amazon, this end was anticipated through postwar European immigration as well as cultural transformations of the rural population. Vargas-era officials, in any event, were more fixated on mass labor transfer to decompress the northeast, colonize the Amazonian hinterland, and fulfill the labor quotas stipulated in bilateral agreements with the U.S. government.

Rather, Brazilian proponents of biotyping touted scientific understanding of the social, psychological, and physiological tendencies of different ethnic groups. Such insights would offer guidelines for sociologists, physicians, educators, criminologists, and army officials in carrying out forensic investigations, military recruitment, athletic training, and professional orientation, "whether manual or intellectual."[140] Thus, Brazilian authorities could apprise the International Labor Organization of the "great qualities" of workers in the Amazon rubber campaign "in whom the indigenous Indian blood is largely mixed with European blood," but decry their "fierce sentiment of individual independence" that made them "unstable as wage earners and explains the measures taken by the Government for the purpose of 'settling' the workers of Brazil."[141] And doctors could ruminate on sertanejos' lanky [*longelíneo*] physiques as the purported product of genetics combined with the lifestyle adaptations demanded by cattle-raising, rather than on malnutrition that stunted growth.[142] In sum, biotype studies reinforced the notion that the genetic origins, anatomical forms, and cultural mindsets of the nonwhite and the poor explained their social standing and destinies, rather than the biases, shortcomings, and omissions of state policies.[143]

"The Historian of Amazonas Must Write in Part the History of Ceará"

As an orator at the Instituto Histórico do Amazonas noted in 1944: "The historian of Amazonas must write in part the history of Ceará."[144] Indeed, socioeconomic ties, family histories, gendered matrices, and the community lore binding Ceará to the Amazon are also fundamental to explain wartime migration.[145] Between 1870 and 1910, an estimated 300,000 to 500,000 nordestinos went to the Amazon, with some 225,500 persons from Ceará alone migrating in the last three decades of the nineteenth

century.[146] Their preponderance led Amazonians to denominate nordestino migrants indiscriminately as "Cearenses," much as residents of São Paulo have labeled all northeasterners in their metropolis as "Baianos." And since identities in the sending regions of the northeast were highly localized, some migrants from Ceará may have only come to think of or represent themselves as "Cearenses" as a result of their experiences as transplants in the Amazon.

During the great rubber boom, trade with the Amazon had buoyed the Cearense economy. Given the Amazon's distance from markets in southern Brazil, Ceará's livestock sector provided cheese, soap, and even canned meat, while mules driven in packs overland to Pará or shipped in small boats from Fortaleza or Camocim were used for transport on the rubber properties. Ceará exported hammocks and men's cotton clothing to the Amazon as well, the latter offering a source of income to poor women in the state's interior.[147] A substantial infusion of capital also came in the form of consignations, remittances, credit orders, and small allowances. Rodolpho Theóphilo calculated that by 1910 the state of Ceará received more than 30,000 contos de réis (8 million cruzeiros) from migrants returning from the Amazon or their remittances.[148] Successful paroaras who "came down" from the Amazon brought back start-up capital for ranches, businesses, and homes.

Indeed, local histories of the sertão recount tales of native sons—few mention daughters—who prospered in the Amazon: whether paroaras who returned home exultantly, or those who remained in the north (although often sending their older children to be educated in Fortaleza). Among the former were José Jeronimo and Manuel Carneiro da Silva, who acquired large properties in Limoeiro with the money they earned in the Amazon at the turn of the century; "Coronel" Vicente Albano, who became the first person in Quixadá to own an automobile; and Francisco Maciel of Icó, who bequeathed upon his death "a fine patrimony through hard work and the resources brought from Amazonas," and whose son still lived in the 1990s off the ranch that his father had purchased.[149] Moreover, the financial records of J. G. Araújo show that the Manaus firm routinely sent remittances on behalf of seringalistas, and even their "customers," to family members in the northeast.[150] In this spirit, Antonia Telles de Mendonça proudly noted in 1941 that her deceased husband, José Sobreira de Mendonça, had migrated as a young man from Ceará to Codajás on the Solimões River, where he had "triumphed," acquiring land with Brazil nut trees. In addition to raising his children in the Amazon,

Mendonça had "never for one moment forgotten or forsaken" his family in Ceará, supporting "old and sickly parents, uncles, siblings, nephews, and many other relatives."[151]

Buarque de Holanda and Graham have offered various explanations for nordestinos' preference for the Amazon over the southern coffee plantations during its concurrent economic boom between 1870 and 1910: stiff competition from European immigrants who secured state-subsidized transport to the São Paulo coffee plantations (based, in part, on the racial bias of government officials and planters against Brazilians of color); the autonomy of rubber tapping compared to the labor regimentation of coffee plantations and its associations with chattel slavery prior to abolition in 1888; the greater facility of transportation from northeastern ports to the Amazon and the softening of oligarchic opposition to emigration with successive cycles of drought; and the lure of El Dorado.[152] Nordestino migration to Amazonia became so commonplace through the first decade of the twentieth century that the verb *embarcar* took on exclusive meaning in backland parlance: travel to the Amazon.[153] Migration fever was spread by the rubber property operators or their labor recruiters in the backlands, by paroaras sporting new clothes, gold chains, umbrellas, and their trademark Panama hat, and by local lore and gossip.[154] Of course, the impetus to get up and go could also arise during drought, from a family dispute or desire for reunification, from a run-in with the law, or from political persecution, as was the case of Eduardo Angelim, the leader of the nineteenth-century Cabanagem revolt.[155]

Relocation to the Amazon typically comprised a strategy for the social reproduction of Cearense households. In his early twentieth-century folklore collection, José Carvalho recounted a compatriot's relief that the Amazon served as the northeastern state's safety valve: "*Compadre*, if God wanna punish the Cearenses, He's gonna have to invent somethin' else: cause drought don't do it no more—everyone goes to Amazonas!"[156] But more well-to-do Cearenses also came to invest in seringais or urban businesses, while the scions of traditional families, confronting fierce competition for government jobs and the subdivision of wealth-holdings under Brazilian inheritance law, sought employment in mercantile firms, white collar professions, or the public sector in the Amazon. Antonio Carlos Sabóia, for example, born in 1882 into a traditional ranching family in Santa Quitéria, arrived in the Amazon at seventeen and started out as a clerk in a commercial firm. He would come to head the firm, as well as to own several seringais in Acre, a steamship, and residences in Manaus

and Belém.[157] Among the Távoras, a prominent family from Jaguaribe, four siblings went to the Amazon during the great rubber boom: Ana Ajuricaba and Idalina became postal agents in Acre, Waldomiro worked as a clerk, and Manoel served as an itinerant physician on the Juruá River between 1904 and 1916 before returning to Ceará, where he was elected federal deputy and later appointed state governor in 1931.[158]

Northeastern migrants to the Amazon, comprising single men and families, charted rural as well as urban pathways, reflective of their varied objectives and the region's multifarious resources. Penetrating the rubber-rich upland western and southwestern frontier, Cearenses populated the banks of the interfluvia of the Tapajós, Madeira, Purus, and Juruá rivers, establishing seringais and small towns, often baptized with hometown toponyms.[159] The Cearense occupation of Acre was also decisive in the annexation of the Bolivian territory to Brazil.[160] Historian Robin Anderson estimates, however, that one-third of northeasterners who arrived before 1910 remained in Pará, the principal point of entry to the Amazon and home to nearly two-thirds of its population at the time. Many migrated in family units, particularly during periods of drought, and settled in nonrubber regions.[161] Thus, according to an 1897 report by Pará's secretary of state, the eastern half of Belém (which included a number of rural parishes) had "an almost exclusively Cearense population," as did the city's commercial sector and skilled trades.[162] Cearenses also congregated in the Bragantina zone, an area of roughly 11,600 square kilometers between Belém and the Atlantic coast where the government of Pará decades earlier had subsidized colonization by European and nordestino migrants in the hope of creating an agricultural belt linked by railroad to the capital. And Cearenses from the coastal county of Aracati played a central role in settling Santarém, Pará's second largest city.[163]

Due to ecological contrasts between the semi-arid northeast and the wet Amazon lowlands, many commentators have emphasized the challenges of environmental adaptation for migrants. This may have been so, to the extent that geography and climate mark human experience. However, in a class-based historical analysis, Weinstein provocatively argued that since the vast majority of nordestinos were peasants or small producers who endured a precarious, subsistence-oriented, semi-migratory lifestyle in the northeast, they might not have found the social and economic relations in the rural Amazon so unfamiliar: While working on a more marketable commodity, part of their time would still be spent in subsistence, fishing, hunting, and small-scale cultivation.[164] Indeed,

on a 1935 field trip to the Colônia Zeunn, at the confluence of the Negro and Solimões rivers, geographer Robert Platt encountered a fishing village at a natural levee of a floodplain that had been recently settled by Cearenses. Before migrating, he noted, most had been "miscellaneous laborers," and not jangada [raft] fishermen, but in the Amazon they had made use of resources accessible with small capital. They built canoes from forest timber; utilized nets made by the leading citizen of the village, who specialized in this equipment and shared in the catch; cast *timbó* (barbasco) into small pools or streams to stupefy fish; and took advantage of the low-river period between June and December when waters receded and fish become concentrated in flood-plain lakes and channels.[165]

To be sure, mass migration to the Amazon declined after the mid-1910s with the plunge in rubber prices.[166] In Rachel de Queiroz's *O Quinze*, inspired in part by the Cearense novelist's first-hand observations of the impact of the drought of 1915, one of the characters dismisses relocation to the Amazon as unpalatable, even for evacuees.[167] Indeed, between 1920 and 1940, the Amazon region had a 14 percent index of negative migration.[168] The population of Pará, for example, declined from 983,507 inhabitants to 944,744, and Acre's dwindled from 92,379 to 79,768. Amazonas's population increased from 363,166 to 438,008 during this period, with growth concentrated in Manaus. Many nordestinos came back to their region of origin, although we lack precise statistical data on interwar returns.[169]

Notwithstanding the post-boom reduction in the aggregate volume of northeastern population flows to the Amazon, emigration never fully abated. During droughts, the Amazon still promised refuge: in 1915, in fact, some 30,000 nordestinos went to the Amazon, and another 20,000 in 1919.[170] And even during the interwar period, depressed conditions in the northeast conjoined with occasional upswings in rubber prices (due to the Stevenson Act) favored nondrought migration.[171] Thus, a 1928 account of an upriver Amazon voyage described 150 Cearense *bravos*, or first-timers, seeking work in Acre, and traveling in the third-class deck "in a jumbled mess."[172] Moreover, since migration was also bound up with ties of kinship, the decision to relocate to the Amazon could never boil down simply to macroeconomic factors. A 1967 study of attitudes toward migration in four different counties of Ceará, for example, found a marked preference for the Amazon only among residents of Aracati, most likely due to its historic position as a seaport from which thou-

sands had embarked for the region since the great drought of 1877.[173] More broadly, the social ties of Cearenses to the Amazon help explain why this particular northeastern state (followed by Rio Grande do Norte) witnessed heavier outmigration to the region than the states of Piauí and Maranhão, notwithstanding their greater geographic proximity.[174]

Gender, Age, and Migration

The Amazon's place in the northeastern imaginary also varied according to gendered and generational perspective. Although tapping rubber was no more an innate talent of northeastern men than women, gendered ideologies normalized the odysseys of male household members to the seringais.[175] In his survey of the Muru River from the 1920s, for example, Father Constant Tastevin reported a population of 915 men, 345 women, and 719 children, while in the upper Tarauacá, out of 1,500 adult men, a scant 400 lived in families.[176] Indeed, as late as 1950, Acre's population was composed of 62,612 men and 52,143 women, reflecting gendered migratory patterns.[177] For younger nordestino men, the particular appeal of rubber tapping may be understood in terms of its alternatives: unlike agriculture, which entailed longer-term investment in planting and harvesting, rubber tapping, requiring great physical endurance, offered the promise of quick gain and geographic mobility.[178] As one wartime migrant headed to tap rubber stated: "Work that's like an inquisition is no good. I like my freedom."[179]

For single men, migration to the Amazon was often a gateway to marriage. Father Tastevin noted that many nordestinos migrated "only in order to return home and marry after acquiring a small capital in Acre"; geographer Gilberto Osorio de Andrade sardonically deemed the "case of the Cearense brides" who "grew old awaiting their betrothed who had 'gone to Amazonas'" as something "historic in the annals of human patience."[180] Often, in fact, Cearense bachelors (and some husbands presumably as well) ended up marrying or cohabiting in the Amazon and staying put. Thus, in nineteenth-century genealogies of Sobral, we find that native son Domingos Carneiro da Silva "married in Amazonas"; subsequently, three of Domingos's nephews followed in his footsteps, also "marrying in Amazonas," illustrating nordestino patterns of inter- and intragenerational integration into Amazonian society.[181]

Youth, in particular, engendered a distinct mix of ascribed social obligation and restive personal ambition in nordestino men that found an outlet in the Amazon. The former apparently was the case of twenty-two-

year-old Espedito Pimentel, who accepted passage to the Amazon from a labor contractor in order to support his widowed mother and sisters in rural Ceará.[182] Likewise, João Amaro recalls how his schoolboy dream of becoming a lawyer was dashed upon the murder of his father, a police officer, in Sobral in 1937. Forced to quit school at twelve, Amaro worked as a tailor's apprentice and other jobs to support his family, until SEMTA recruiters rolled into town five years later, enlisting him in the rubber campaign. Amaro spent the war on the property of Otávio Reis, although it is unclear if he was ever presented with the seringalista's aforementioned rulebook.[183] On the other hand, the braggadocio of youth resonates in letters from Jorge Gurgel do Amaral, scion of a prominent Cearense clan, to friends back home. "I'm staying until I get rich or die," he wrote in 1919, and although twelve years later, he was still not rich (or dead), having "met cats that were sharper than I and that got one over on me," he held out faith: "fortunately I am still young, strong, healthy (they say even handsome) and full of courage to go into the forest. Because of this I go about happy and content with everything and everyone. Nothing frightens me. Not even the things that they say rack the interior, especially in Amazonas."[184] The quest for adventure also permeates Alfredo Lustosa Cabral's autobiographical *Dez anos no Amazonas (1897–1907)*. Cabral tells of the return of his twenty-four-year-old brother, Silvino, to their hometown of Patos, Paraíba, in 1897 after a five-year stint in the Amazon. Regaling family and friends with his adventures in the north and a Cosmorama purchased in Belém, Silvino captivated fourteen-year-old Alfredo, who jumped at his brother's invitation to return with him to the Amazon.[185]

In the patriarchal society of the northeast, filial revolt also drove young men to the Amazon. Recounting his decision to leave home as a teenager, Waldemiro Távora wrote to his brother from Rio Acre, Bolivia, in 1917: "I've wasted my whole youth without joy or pleasure; when I was in the company of my parents, I was nothing but subordinate to paternal power. I left them, as you know, when I was 18 years old, stripping them illicitly of their claims on me."[186] Although Távora hailed from an elite Cearense family, his frustration may have mirrored that of his poorer compatriots. Allen Johnson's research among Cearense sharecroppers in 1966–67 revealed that because unmarried men over fifteen were expected to contribute fully to their families by turning over wages and crops to their fathers, the idea of becoming the "head of household" appealed to both young

men and women of marriageable age.[187] Johnson's fieldwork took place two decades after the war, but his description of the tensions in peasant households jibes with oral testimonies of wartime migrants.[188] Interviewed in Manaus in 1944, for example, Edgar Pereira da Silva explained his decision to leave the northeast: "I fled from my house and followed destiny. I left my cotton growing and my father's house and picked up and left with some buddies . . . I hope to return in time to pick the cotton that I left growing there on my father's land."[189] Da Silva's framing of his journey as flight from his father's house and land is revealing. Indeed, the Ceará census of 1940 sheds greater light on the potential for such intergenerational friction in peasant families. Of the 260,504 males between the age of ten and thirty who worked in the primary sector, 96,719 were occupationally defined as "family members," or subsidiary members of the household: 77,346 were between ten and nineteen, and 19,373 between twenty and twenty-nine.[190] We can only wonder how many young men who ran off to the Amazon were left pondering, like Waldemiro Távora: "Maybe the torture and suffering that I have experienced ever since I parted company with my progenitors is a reparation for the suffering I caused them."[191]

Visions of the Amazon: Migrants' Information Networks

During the classic rubber boom, Weinstein postulated, the longstanding presence of nordestinos in the Amazon probably led few migrants to imagine that they could get rich effortlessly in the region. Rather, rubber tapping was viewed as a means to earn some cash to send back to family, or at the very least, ensure a family's or individual's subsistence.[192] In fact, the historical ties spanning Ceará and the Amazon sustained vast, informal networks of information. Northeastern returnees served not only as sources of information about the Amazon but potential recruits. According to the census of 1940, 5,613 residents of Ceará had been born in the Amazon (3,001 in Amazonas, 2,009 in Pará, and 603 in Acre), but the data do not indicate when these individuals, presumably descendants of Cearenses, arrived in the state; they do show that the highest number of Amazonian-born residents in the state in 1940 were between the ages of 20 and 40.[193] This represents a small fraction of a population of over two million, yet the census does not capture the short-term and back-and-forth interregional migration that eluded state record-keepers but sustained networks of information for nordestino families and com-

munities. In his 1943–44 study of wartime migration to the Amazon, for example, Samuel Benchimol found that eighteen of the fifty-five men that he interviewed in Manaus—nearly one third—were "*mansos*," nordestinos who had already tapped rubber in Amazonia. Although Benchimol did not systematically analyze the dynamics of return migration, he recorded the testimony of two such returnees. One stated that he had never readapted to life in Ceará: "Everyone called me a paroara, and hated me. I found everything so strange. I couldn't get used to things there. So I picked up once and for all." Another noted the animosity he confronted when he returned to what had once been home: "We come back and can't walk the walk or talk the talk of the sertão . . . No one speaks to us because they say we are filthy rich."[194] Similarly, an account of an April 1944 ship voyage from Fortaleza to Belém described one group of migrants comprising an elderly widower between 55 and 60, traveling with his "six strong sons," who had been upriver and returned to Paraíba to bring his children back with him.[195] The numerous returnees battling malaria, beriberi, and other infirmities presumably had their own cautionary tales.[196]

Indeed, stories relayed from fathers to sons, uncles to nephews, and between cousins or siblings helped shape decisions to migrate. Thus, in 1943, Fortaleza resident Antonio Fernandes de Albuquerque recalled how his father, who transported livestock from Ceará to Pará and Acre during the great rubber boom, had told of tappers who were brutalized and enslaved by bosses. Albuquerque did not migrate during the war—although he insisted that under the leadership of Getúlio Vargas, protector of the "great worker of the Brazilian Nation," such abuses would never happen again.[197] Otávio Carlos Monteiro, however, did follow in his father's footsteps from Ceará to the Amazon. Tapping rubber for six years during the great boom had enabled Monteiro's father to construct a new house in rural Ceará upon his return, but he struggled to sustain a family of ten. With the outbreak of war, thirty-two-year-old Otávio jumped at the opportunity to migrate to the Amazon alongside his cousin, leaving behind his brothers, who feared German submarine attacks and the solitariness of the seringais. Radio broadcasts in the Jaguaribe valley trumpeted the opportunities in the Amazon, but Otávio most likely had already been influenced by his father's stories. When I interviewed him in Manaus, ninety-one-year-old Otávio listed an additional reason for opting for rubber tapping over military conscription—the former was potentially more lucrative.[198]

Literate migrants, moreover, might report in their letters on conditions in the Amazon. Reduced to poverty on his small seringal following the crash in rubber prices, Leonidas Moreira appealed in 1931 to influential friends back home to help him find work in the public sector either in the Amazon or "our Ceará."[199] Another émigré wrote from the Seringal Juruá in 1930: "I am in this inferno of mosquitoes, exposed to the plague, suffering because I lack 300 mil-réis for my voyage," which he had been unable to acquire, despite having "skimped in all different ways."[200] On the other hand, Delsuite Felipe Carlos, who arrived in the Amazon as an infant with her family in 1943, claimed that her father had received letters from a brother-in-law in the region, boasting of the fertility of the land and the abundance of fish. In 2001, from her modest home in Manaus, she bemoaned the "hard life" that her family initially experienced in the Amazon, but "thanked God" that they had resettled.[201]

Finally, popular depictions of Amazonia circulated in the northeast through *literatura de cordel*, pamphlet stories in verse that offered listeners news and entertainment and drew heavily on oral tradition.[202] During the early twentieth century, a number of northeastern bards traveled to Belém and Manaus in search of work.[203] Editora Guajarina, founded in Belém in 1914 by Pernambucano Francisco Rodrigues Lopes, published hundreds of *cordéis* that were sold and distributed in the northeast, the urban centers of the Amazon, and even on the seringais. Other chapbooks with Amazonian themes were produced in the northeast.[204]

Many *cordéis* highlighted both the risks and opportunities in the Amazon.[205] One of the verses recorded in Pedro Calmon's *História do Brasil na poesia do povo* laments that

> Cearense vai ao norte
> Sonhando áureos castelos
> Sai daqui robusto e forte
> Volta magro e amarelo.
>
> The Cearense goes to the North
> Dreaming of golden castles this fellow
> Robust and strong he leaves
> Returning skinny and yellow.

Yet another poem celebrates:

> Vai de camisa e ceroula
> As vezes rasgada em tiras

E volta de lá, pachola,
De chapeu de sol, cartola
E terno de casimira.

Ofttimes tattered and torn
In a shirt and underpants he leaves from here
And he returns a dandy reborn
With a sun hat, a top hat adorned
And a suit of cashmere.[206]

Similarly, in "Grande Peleja de Josué Romano com Antonio Mulatinho na Cidade de Manaus" ("The Big Battle between Josué Romano and Antonio Mulatinho in the City of Manaus"), an old-timer's admonitions are disregarded by a recently arrived northeastern migrant:

M. Josué quem te deu tão mau conselho?
Como é que tuas terras abandonas,
Para vai arriscar a tua vida
Neste clima terrível do Amazonas,
Onde mais de dois mil Paraibanos
Se acabaram aqui, por estas zonas.

J. Mulatinho, eu só vim ao Amazonas
Conhecer esta terra tão falada
Onde vivem o martírio e a doença,
Onde a peste do mundo fez morada;
Eu, porem, que não morro de careta,
Tudo enfrento e não me sucede nada.

M. Josué, eu lamento a tua sorte,
Pois vieste morrer longe dos teus;
Eu também, faz dez anos que cheguei,
Nunca mais pude ver parentes meus.
Meu colega quem chega nesta terra
Tem até que perder a fé de Deus!

J. Mulatinho, Você repare bem
que não tenho caráter de pajé
O castigo maior que houver no mundo
Inda não amedronta Josué.
O punhal esta dentro, porém eu
Morro e não arrenego a minha fé.

M. Josué, who gave you such bad advice?
How can you leave your home,
To risk your life this way
In this terrible Amazon climate to roam,
Where more than two thousand Paraibanos
Ended up here in these zones.

J. Mulatinho, I only came to the Amazon
For its famed lands have called
Martyrdom and disease go hand in hand,
Where the world's plagues are installed;
But I won't die from grimaces,
I'm not scared, for to me nothing will befall.

M. Josué, I pity your fate,
Cause you came to die far from kin;
I've been here too for ten years,
I never saw my relatives again.
My friend, whoever comes to this land
Has to even lose faith in Him!

J. Mulatinho, look here
I'm no shaman, no way
The worst punishment in the world
Does not scare Josué.
The dagger is inside, but I
Die and do not renounce my faith.[207]

Most poignantly, popular literature bemoaned the stark inequalities that impelled northeastern men to leave their homes for the Amazon. As Juvenal Galeno recited in "O emigrante":

Vou deixar a minha terra,
Vou para os matos d'além . . .
Que aqui não acho serviço
Para ganhar meu vintém
Vou soluçando saudoso
Do Ceará do meu bem! . . .

Que importa a febre—as maleitas?
Perigos . . . onde os não há . . . ?
Só morre o homem na hora!

Mas quantas fartura lá!
Quem não se arrisca não ganha . . .
Sem ganhos, quem viverá? . . .

E é dever de quem precisa,
Por longe alcançar o pão
Se o não tem dentro de casa,
Se o não tem no seu torrão . . .
Deus ajuda a quem procura
Cumprir sua obrigação.

Vou, pois, às outras paragens,
Como vai o passarinho
Buscar comer para os filhos,
Que choram dentro do ninho . . .
Como volta ele contente
Trazendo cheio o biquinho!

Agora, adeus ó meus campos
Adeus, brancos areais,
Que vou lutar pela vida
Nos desertos matagais . . .
Que eu vou enxugar meus prantos
Com choros dos seringais!

I will leave my land,
To go to a wilderness far away . . .
As here I find no work
To help me earn my way
I will go sobbing with longing
For Ceará in my heart to stay! . . .

What of the fever—the diseases?
Danger . . . where is it not found . . . ?
Man only dies when it's his time!
But how much plenty there abounds!
One who does not risk does not win . . .
Without earning, who can stay around? . . .

And it's one's duty for those in need,
To go far away to earn his bread
If he cannot at home,

If not in his land instead . . .
God helps those who seek
To fulfill their obligations, it is said.

I will go, then, to other whereabouts,
As the birds do attest
Finding food for their chicks,
Who cry inside the nest . . .
How happy does he come back
With his beak full for the rest!

Oh farewell now to my fields
Goodbye, white sand,
I will fight for my life
In the deserted forests at hand . . .
I will dry my tears
With cries from the rubber trees' land![208]

Northeastern Family Affairs in the Amazon

Wartime migrants, of course, did not undertake or understand their journey to the Amazon merely as sharecroppers, artisans, drought evacuees, or first-timers, but as family members. Inflected by gendered and generational norms, migration to the Amazon constituted a household affair pulsating with an emotional intensity and conflict that official documents conspire to numb. The husband and father who embarked to provide a better life for his wife and children; the son who hoped to send home money to assist his parents and siblings; the families that came to weather the drought or to start anew represent the flesh and blood, subjective drama of thousands of nordestinos in the Amazon during the war. "I'm mad with *saudades* for you and my daughter," wrote Antonio Fereira Amâncio from Belém in 1943 to his wife and child in Ceará, attempting to bridge with several words an immeasurable absence.[209] "Don't forget to write me," penned Sebastião Felix de Oliveira to his wife while en route to Manaus, enclosing 40 cruzeiros (most likely his per diem payments) as a sign of his devotion to her.[210] "A blessing for an obedient son who has not forgotten you for even a minute," Inácio Epifanio Souza asked of his mother, enclosing 100 cruzeiros and his photograph in his letter from Belém.[211] "My main enterest [*sic*] is for them to learn to read someting [*sic*] so that they do not turn out ignorant like I am," Manuel Francisco da Silva wished for his two sons prior to embarking for Belém in July

Figure 4.2 Migrant reading letter at government camp while in transit to upriver Amazon rubber zones. *Source*: National Archives.

1943.[212] But if wartime migrants took pride in the money they sent home and the familial ties they hoped to strengthen, separation also strained household incomes and bonds of loyalty. The Amazon also offered an escape for the malcontent husband, a hideout for the deadbeat dad, and a refuge for rebellious youth.

At the Porangabassu camp in Fortaleza, which housed the dependents of men transported to the Amazon (for those who selected this form of family assistance under the SEMTA recruitment contract), the letters exchanged between migrants and their families brimmed with gestures of solicitude. Given the high levels of illiteracy in the northeast, Regina Frota Chabloz, a social worker at Porangabassu, served as an important intermediary in writing, reading, and undoubtedly censoring many of the letters—as well as retaining several for the historical record. The correspondents' errors in spelling and syntax, or very inability to write, reflect the scant educational opportunities that constrained personal options (see figure 4.2). Yet they also reveal how husbands and fathers struggled to uphold or transpose their traditional patriarchal roles as protector and enforcer, even as geographic distance broke down communication and chains of authority. Leopoldo Casimiro Lucena, who had left behind

seven dependents in Fortaleza, jotted off a note to Regina Chabloz before embarking from Belém: "I ask that you put the children in school. When I arrive in Acre I will send another letter. Don't forget about my family."[213] Juca Cassindé, who had requested that his pregnant daughter, Macbete, be treated with "all the necessary comforts" at Porangabussu, expressed delight upon learning that she was "enjoying better health and chubbier and less palid."[214] Alfredo Mesquita de Oliveira, who left a family of five, inquired whether his beloved wife, Antonia Luciana de Araújo, had received the 25 mil-réis that he had dispatched in a previous letter. And when he learned that women at the camp had been sent to hoe, make bricks, and perform other "jobs that were meant only for men," Mesquita pleaded with Chabloz to spare his wife, particularly since he had been assured that women would only do "light work" like "lace-making, starching clothes, and raising chickens."[215] Manoel de Souza Viana wrote in August 1943 with an identical complaint, threatening to remain in Manaus unless his wife received "easier tasks."[216]

Yet the emotional and financial strain of male migration often took its toll on those left behind. In April 1942, Sebastiana de Abreu, a twenty-two-year-old domestic in Fortaleza "of brown skin with rudimentary education," was eight months pregnant with the child of José de Oliveira, a shoemaker. The couple was not married, and José apparently decided to try his luck, or flee from impending fatherhood, by embarking unaccompanied for the Amazon. Bereft, Sebastiana asphyxiated her newborn after giving birth in her backyard, and was soon arrested.[217] While Sebastiana's recourse to infanticide represents an extreme act of desperation, its very exceptionalism in many ways underscores the vulnerability that women and children faced when husbands and fathers departed for the Amazon.

During the war, the U.S. consul in Fortaleza estimated that migrants had left 8,000 dependents, mostly in their homes in the interior of Ceará.[218] How many women lived in "sadness," like Elcidia Galvão, "crucified" by *saudades*, longing to hear "comforting news" from husbands who had not sent any word from the Amazon?[219] Or suffered like Maria Emília Ramos Câmara, whose husband had left her with twelve children in Paraíba, and whom she had not heard from in five months?[220] How many children, like Galvão's son, prayed every night to receive news from their fathers, fearful that "daddy seems to have forgotten us because everyone else writes to their families but daddy doesn't?"[221] How many agonized over whether their menfolk were "alive or dead?"[222]

In the letters of wives and children, declarations of love and longing

vie uneasily with feelings of dread and abandonment, with the mercy of divine providence often beseeched. "It's with my eyes raised to the heavens that I pray to God that you read this message of my loneliness and longing (*saudades*) for you and that it finds you enjoying the twin blessings of Health and happiness," Joana Abreu wrote to her husband, Guilhermino. Their young daughter had once boasted that "Daddy went to Amazonia to earn money for Suzete." But lacking a response from her husband to her five letters and two telegrams, and unable to afford even a cigarette, Joana now insisted that Guilhermino "better have someone come get me."[223] And Edith Dionisio de Oliveira, who had not received word from her father in two months, implored Regina Chabloz to send a telegram to discover his whereabouts.[224] The fact that these women's letters remained in Regina Chabloz's possession suggests that they were undeliverable not so much due to content, since other migrants in transit received equally alarming reports. Rather, SEMTA could no longer keep track of migrants' whereabouts once they had decamped in Belém or Manaus. Given workers' geographic mobility, the difficulties of long-distance communication, and the tenuousness of state power in the Amazon, migrants to the upriver rubber regions lost contact with their loved ones. For family members torn asunder, the Amazon assumed disparate, and often incommunicable, meanings.

Migrants and Tappers: The Long Haul

Between August 1942 and November 1943, the Vargas government suspended the maritime route between Fortaleza and Belém because of German submarine attacks on Brazilian coastal shipping, which sank twenty-three vessels during 1942. In place of the standard 3–4 day journey, Brazilian officials devised an overland trek from Fortaleza to São Luís. The transportation bottlenecks that vexed U.S. and Brazilian government officials eyeing time-space compression had more direct consequences for migrants. In a convoy of six pickup trucks, each holding thirty-five workers, migrants departed from Fortaleza on a sun-drenched or rain-soaked journey of 600 kilometers to Teresina, Piauí, with rests en route at two newly constructed way stations (see figure 4.3). Of the next leg of the trip, a freight train from Teresina to São Luís (see figure 4.4), one migrant recalled: "There was no air inside. To breathe, you had to open all of the doors, and some passsengers preferred to risk their lives by clinging to the outside of the train."[225] In the final stretch from São Luís to Belém, a distance of approximately 250 miles, migrants traveled

Figure 4.3 SEMTA recruits departing Fortaleza by truck. *Source*: Departamento de Patrimônio Histórico e Cultural do Estado do Acre.

Figure 4.4 Transport of migrants from Teresina to São Luís via railroad. *Source*: National Archives.

by ship.[226] Due to lack of fuel, the breakdown of the railway, and a shortage of vessels, the alternate route from Fortaleza to Belém lasted anywhere from 16 to 42 days. Journeys up the Amazon River were further stalled by the lack of shipping, bosses' reluctance to contract untested labor, and low water levels during the dry season.[227]

Brazilian officials claimed that the overland, coastal, and fluvial journey of some 5,000 kilometers from the northeastern backlands to upriver seringais averaged two months, but the trip often took far longer.[228] Clovis Barreto recalled that his voyage from Ceará to the seringais of Amazonas lasted six months, two of which were spent at the Tapanã camp in Belém awaiting transport upriver.[229] Under the SEMTA contract, migrants received a daily wage en route to the rubber properties, yet no matter how much migrants passed the time playing cards and dominoes, conversing with old and new friends, playing guitar and singing, having endurance matches, or peering from river boats at the Amazon's majestic sky, the voyage was trying. Crowded and unsanitary conditions in transit facilitated the outbreak of disease, petty crime, melees, and desertions. At Teresina, for example, migrants waited sometimes for over one month for the train to São Luís. A nutritionist who inspected the camp at Teresina denounced the unhygienic conditions at the kitchen (see figure 4.5); the "deplorable" quality of the food, served in troughs "as if it were food for pigs," nearly incited revolt.[230] Government officials also blamed delays at Teresina for a spike in venereal disease, which men reportedly contracted from local prostitutes, and which doctors had a tough time treating due to patients' mistrust of Sulfathiazol and their inventiveness in stashing unused pills under bed sheets.[231] In general, the "violent manner by which the administration sought to resolve" acts of "indiscipline" only aggravated the situation at the camp.[232] In São Luís, government delays in insuring ships, authorizing transport, and securing naval escort held up migrants; some who grew tired of waiting, or who feared German U-boats, even trekked overland to Pará, hitching a ride on the Bragança railroad to reach their destination.[233] And reporting on the migrant camps at Belém and Manaus (see figure 4.6), a U.S. journalist noted in November 1943: "Some of these men had been idle behind these fences, fighting among themselves and with their guards for as long as seven months. The men are disgusted and eager to go home."[234]

From late 1943 onward, absent the threat of German attacks, migrants once again made their way from Fortaleza to Belém on Lloyd Brasileiro ships, but the vessels were often overcrowded and the voyages drawn-

Figure 4.5 Mess hall for male migrants at government camp in Manaus. *Source*: National Archives.

Figure 4.6 Men at government barracks at Ponta Pelada, Manaus. *Source*: National Archives.

out.[235] Ships equipped to carry 280 passengers sailed with over 800, while way stations constructed to house 600 migrants typically held no less than 800, and sometimes as many as 1,200 people.[236] In June 1944, an epidemic of spinal meningitis spread in a Belém labor camp, claiming ten lives and leading health authorities to establish a strict quarantine for fifteen days.[237] On another ship en route from Fortaleza to Belém, 44 passengers were stricken with measles, and several children died.[238] And doctors reported in July 1945 that on the river boats of the Purus River, passengers were treated like "veritable animals, lodged in horrifying conditions," and afflicted by a diphtheria epidemic.[239] As U.S. government officials lamented, the "complete neglect of the individuals and agencies charged with their transportation and welfare" probably destroyed many migrants' morale.[240]

The saga of northeastern migration to the Amazon was supposed to have been different this time under the aegis of the government. In some ways it was. In light of the slapdash relocation of tens of thousands across regions with precarious infrastructure, mortality rates in the northeast and in transit might have been considerably higher in the absence of medical care at camps and way stations. During 1943, for example, over 20,000 people passed through the government camps maintained in the northeast and the Amazon: 80,000 physical examinations were performed; 100,000 treatments, 40,000 medical consultations, and 26,000 vaccinations administered; and over 5,000 people hospitalized.[241] Yet the tumult or tedium of the trip also bespeaks the shortfalls that upended public policies and personal journeys. The Brazilian government undertook mass population transfers notwithstanding the well-known inadequacy of housing, transportation, and food supplies in the Amazon.[242] Alternatively, we might argue, *because* high-ranking officials in the Vargas administration recognized such limitations, they harnessed American financial and technical assistance and northeastern surplus labor to spearhead the transformation of the Amazon.

In 1956, journalist José Stenio Lopes charged that his northeastern compatriots had been led by Vargas to the Amazon like "cattle to the slaughterhouse or Jews to the Nazi gas chambers."[243] The Vargas regime did fail to uphold wartime promises to reform the Amazonian rubber trade and to assist migrant labor. Yet during World War II, nordestinos who migrated to the Amazon had not been stupefied by drought or government propa-

ganda. And while migrants could not control the myriad of forces that bore down on them, their struggles to eke out a living in the Amazon or to return home often confounded bosses and bureaucrats in search of a pliant workforce. At a way station in Manaus, for example, migrants told U.S. officials in September 1942 that they sought "fair conditions and fair pay" in the Amazon.[244] Or as another transplanted nordestino affirmed: "I came to earn money in the rubber properties and then return home."[245] If U.S. officials subsidized labor transfers to boost rubber production, and the Vargas regime promoted frontier colonization as a geopolitical strategy to fill so-called demographic voids, nordestinos who sought out the Amazon demanded a chance to improve their lot.

Enveloping populations at the margins of the Brazilian nation-state and Allied military theaters, northeastern migratory flows to the Amazon during World War II reflect the interplay among local, national, and global forces that shape personal decisions, political outcomes, and cultural landscapes. Individual odysseys to the Amazon, in fact, were structured by macroeconomic conditions, public policies, and informal social networks. Amidst deep-seated social inequalities, drought and wartime economic dislocations meted out uneven punishments on backland populations, influencing which sectors would migrate to the Amazon, and under what terms. State-subsidized transportation, rather than despotic wile, served to channel workers to the Amazon, as did government-administered medical exams. And familial and communal pathways of migration, patterned by gendered and generational norms, molded Cearense wartime journeys. Possessing distinct understandings of the Amazon, derived from historical experiences, social expectations, and cultural norms, nordestino migrants would chart varied courses in and for the region.

CHAPTER 5

WAR IN THE AMAZON

Struggles over Resources and Images

During World War II, a multinational, cross-class set of actors battled to remake the Amazon. Although formally allied against the Axis, their common mission was fractured by subjectivities of class, gender, profession, and nationality. A forest coveted by U.S. wartime policymakers for its rubber trees loomed for Brazilian statesmen as a vast hinterland clamoring for national integration. Migrants and tappers contemplating varied patterns of land use and market insertion clashed with merchants and bosses angling to profiteer. Progressives in the Northern and Southern Hemispheres championing rural uplift sparred with conservatives who decried redistributionist policies. And the immediacy of the forest in sustaining livelihoods cleaved locals from geographic outsiders. These competing wartime visions engendered disparate productive and ideological spaces in the Amazon.

This chapter analyzes the interlinked struggles over resources, representation, and power in the Amazon. Each of its four sections examines a discrete set of mediators—U.S. policymakers, Brazilian officials, rubber bosses, and migrants and tappers—whose regional designs left varied imprints on lives and landscapes. In spotlighting transnational processes, I contend that although Amazonian history cannot be shoehorned into the mold of dependency theory—which attributed Latin American underdevelopment to the predatory demands of wealthier nations for primary products—neither was the regional impact of U.S. wartime poli-

cies inconsequential.[1] In foregrounding class tensions, I underscore social inequities in the Amazon, but highlight as well the agency of tappers and migrants in challenging dominant structures and ideologies. A focus on multiple and interpenetrating scales reveals how the landscapes of the Brazilian Amazon have been shaped by hard-pitched battles that have raged and ranged over diverse geographies.

I. U.S. Mediators and the Uses of Amazonian Nature

During the war, Americans viewed the Amazon through multiple lenses. The military relished access to bases and raw materials; bureaucrats found a mission and a paycheck in agencies committed to rubber procurement; doctors, sanitarians, engineers, nutritionists, and investors dreamed of reaching new publics; the media prowled for titillating stories; and drivers may have pondered the forest's importance when they got a flat. Faith in technological fixes and the malleability of nature in the Amazon jostled with cultural prejudice and condescension. Yet irrespective of ideological tenor, the sustained, broadscale investment by the United States in the Amazon pivoted on the forest's rubber trees.

To increase rubber production, U.S. policies favored the formalization of labor, the sale of low-priced goods, and improved health care and transportation in the Amazon Basin. As noted in chapter 2, the April 1943 accord between the RDC and the Superintendência de Abastecimento do Vale Amazônico (SAVA) promoted the cash sale of tapper supplies to bosses at discounted prices in an effort to undercut commercial monopolies. Moreover, to transport supplies and ferry out rubber, U.S. agencies introduced five oil-burning steamers, forty-eight Higgins light draft boats, and twenty-three landing barges with twin diesel engines.[2]

American and Brazilian officials further projected the modification or circumvention of Amazonian waterways. The proposed Casiquiare canal, for example, would have linked the Amazon with the Orinoco River, offering rubber production a second outlet to the sea when submarine attacks endangered the existing route, and connecting Brazil to Venezuelan oil fields. A joint U.S.-Brazilian initiative, the prospective inland waterway mobilized a team of engineers, surveyors, and medical officials from the U.S. Army Corps of Engineers and the Comissão Brasileira Demarcadora de Limites, who undertook aerial photographic surveys and hydrographic and terrestrial studies in the region in January 1943.[3] The RDC also introduced water alighting equipment, such as flying boats and amphibian aircraft (see figure 5.1). Between September 1942 and April 1943, for ex-

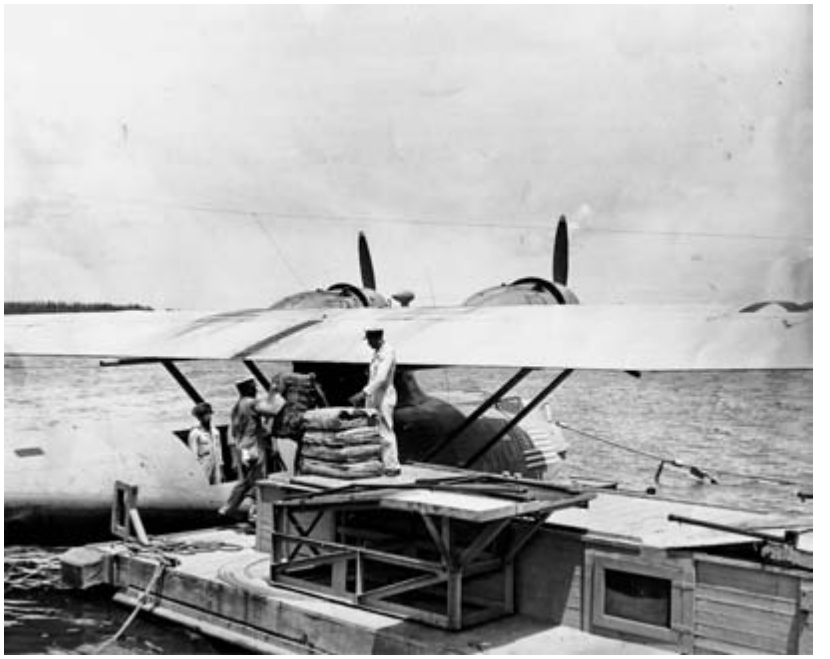


Figure 5.1 Flying boats (PBYs) were used by the U.S. government's Rubber Development Corporation to deliver supplies upriver and to take out rubber from the Amazon. *Source*: National Archives.

ample, amphibian planes transported a total of 299,801 pounds of rubber from Manaus to Miami in a thrice weekly air service.[4] In addition, the RDC planned the construction of twenty airfields in the Amazon Basin to increase rubber output and reach inaccessible zones in Mato Grosso—although the project may have been devised at the behest of the U.S. army, preoccupied with defense of the Brazilian bulge and the Panama Canal prior to the defeat of the Nazis in North Africa in May 1943.[5]

Notwithstanding significant U.S. investment in the Amazon, rubber yields lagged. In 1940, Brazil had produced 16,135 long tons of rubber. Wartime output increased to only 17,854 tons in 1942; 20,875 tons in 1943; 22,350 tons in 1944; and 17,973 during the first eight months of 1945.[6] In testimony before the U.S. Senate in December 1943, RDC president Douglas Allen estimated that his agency had spent nearly $60 million on the Amazonian wild rubber program since 1941. Based on such expenditures (which included the purchase of rubber, development costs, capital investments, loans, operating and administrative expenses), the U.S. government had paid $1.12 per pound for Amazonian rubber.[7] This

calculation excluded the budgetary allocation of other agencies active in the region, such as the OIAA.

To be sure, U.S. officials faced considerable obstacles in supplying the Amazon, including preparing inventories and forecasts, undertaking purchase orders, and furnishing and warehousing goods. Lack of coastal steamer space and seasonal fluctuations in river levels necessitated particular care in coordinating transport. Yet U.S. officials often blamed locals for the shortfall, faulting the "general attitude of non-cooperation" of Amazonian merchants and commercial firms toward increased government regulation of the rubber trade.[8] "The war means nothing to these people, and they have only a secondary interest in supplying rubber to the United States," fumed one government official. "The methods, the quarrels and the manner of thinking of these peoples are fantastic. The situation in all respects resembles a third-rate musical comedy, except in the deadly seriousness of its implications."[9] The Amazon trade, once seen by some Americans as an antidote to rubber dependency, a laboratory for scientific innovation, a foundation of inter-American cooperation, and even a firewall against corporate trusts, now epitomized tropical degeneracy.

As we will explore, Amazonian bosses and merchants did divert subsidies for rubber production to rig debt merchandising. At the very least, their fiscal conservatism hamstrung production and confounded migrants who traveled thousands of miles in search of work. Exploited or abandoned on the rubber properties, workers did flee, fall back on subsistence, or seek employment in urban centers in the Amazon.[10] Yet U.S. diplomatic and historiographical indictment of Amazonian noncompliance is not so much incorrect as one-sided. Once an isolationist illusion had been shattered, the challenges of extractivism exposed, the synthetic industry launched, the Nazis halted in North Africa, and the advocates of inter-American economic cooperation marginalized, little could sustain or explain long-term U.S. government investment in the Amazon rubber trade. The particularistic claims on tropical nature that anchored U.S. wartime initiatives in the Amazon now unmoored them. As Bunker and Ciccantell have noted, when the lag between global demand and local supply becomes too great, states and firms in the core regions mobilize science, commerce, imperialist or colonial forces, and debt finance to resolve problems of rising cost and scarce or inconsistent supply. The alternatives include finding sources of the raw material in other locations (and arranging transport systems to accommodate them); domesticating

and converting the natural sources of the raw material to plantation cultivation worked by a cheap and stable labor force; or finding natural, technical, or synthetic substitutes for the raw material in question.[11] The Amazon wartime rubber boom would fall prey to the triad.

As noted in chapter 2, the Rubber Survey Committee had prioritized the development of a synthetic rubber industry under the aegis of the rubber director, an appointee of the chairman of the War Production Board. The $700-million government initiative, which brought together state officials, industrialists, scientists, and academics, proceeded with astonishing speed. By 1944, private corporations leased and operated fifteen synthetic rubber plants on a "cost plus management fee basis," manufacturing four grades of rubber (the principal known commercially as Buna S), and producing over 773,000 tons during the following year. By the end of the war, the rubber facilities operated at an annual capacity of 830,780 tons, or 87 percent of domestic use, nearly inverting prewar consumption patterns of synthetic and natural rubber.[12] The United States had also gone from the largest global importer of rubber to its chief exporter.[13] Thus, borrowing from geographer Neil Smith, we can assert that, in transforming rubber from a raw material tethered by geography into an industrial product determined by the location of productive forces, capital had remade society and nature.[14] Moreover, with Ceylon and India meeting annual raw rubber quotas—at a mere 28 cents per pound—the Amazon still lagged as runner-up to its few remaining Asian competitors (see table 5.1).[15]

Waning U.S. commitment to Amazonian development also reflected the conservative upswing in domestic politics. In November 1942, Republicans captured an additional forty-four seats in Congress and nine in the Senate. By 1943, dollar-a-year business executives held over 800 posts at the War Production Board, and the nation's top 100 companies filled 70 percent of all war and civilian contracts.[16] And in February 1943, the rubber director restored sole jurisdiction over natural rubber development and procurement to the Reconstruction Finance Corporation, depriving the Board of Economic Warfare of policy-making responsibilities with which Vice President Wallace had hoped to remold postwar politics in the Americas.[17] In July 1943, following a mortifying high-profile public duel between Jesse Jones and the vice president, Roosevelt abolished the BEW, dropping Wallace as his running mate the subsequent year.[18]

After mid-1943, the RDC tapered its activities in the Amazon. The bally-

Table 5.1
U.S. Imports of Crude Rubber by Region and Shipping Weights (Long Tons), 1939–1944

REGION	1939	1940	1941	1942	1943	1944 (TO AUGUST 31)
Amazon Countries	4,958	5,939	4,779	5,872	12,990	13,684
Mexico (guayule)	2,232	3,634	4,881	5,548	7,678	5,237
Central America	33	54	88	630	2,315	1,724
Other America	764	1,433	1,040	2,441	3,211	1,603
Liberia (plantations)	5,331	6,917	7,293	9,897	13,656	11,950
Ceylon, India, Southeast Asia	486,298	800,647	1,010,926	258,155	19,706	37,969

Source: Adapted from Report on the Operation of Rubber Development Corporation, February 23, 1943, to August 31, 1944, Washington, DC, September 30, 1944, PUL, PHW, Box 3 RDC-History and Organization, Folder 10, Document 3.

hooed airport network shrank to one airfield at Manaus and another at Iquitos, Peru, while the proposed Casiquiare canal was shelved. The RDC withdrew staff, restricted its aviation department to delivering supplies upriver, canceled orders for millions of dollars in goods, and amended existing agreements with the Brazilian government.[19] A September 1943 accord, for example, liquidated RDC responsibilities relating to the recruitment of workers and assistance to their families.[20] An agreement of February 1944 extended a premium of 33.33 percent above the 45 cent per pound for Acre fine rubber until March 31, 1945, but disavowed further responsibility for stockpiling and distributing discounted foodstuffs and tapper supplies as of June 30, 1944.[21] These activities were turned back to private trade under the responsibility of the Brazilian government.[22] "We have found the Brazilian agencies are performing so efficiently," claimed RDC's Maurice McAshan to a Manaus daily in August 1943 in justifying the U.S. pullout, notwithstanding significant evidence to the contrary.[23]

While the twenty-first-century agro-ranching boom in the Amazon attests to the capacity of capital, technology, and politics to defy (and defile) its ecosystems—including many of the legendary challenges of river navigation—the wartime overhaul of the Amazonian landscape required financial resources, consumer demand, and government backing that proved untenable in the United States.[24] In its stead, U.S. officials crafted narratives to cut and run from the forest, distancing themselves from another messy intervention in Latin America. If the launch of the synthetic rubber industry represented a feat of scientific know-how and national can-do, the Amazon came to embody the nature of underdevelopment and the underdevelopment of nature.[25]

"OUR DEEP DARK SECRETS IN LATIN AMERICA"

With Rubber Development's retreat from the Amazon, the canard of the benighted jungle rebounded in U.S. political discourse. A tug-of-war in which tropical huns triumphed over American do-gooders, and where socioenvironmental factors vanquished political reform, offered a convenient explanation for getting rid of domestic opponents and a foreign policy imbroglio. Following a month-long trip to the Amazon in September 1943, W. N. Walmsley of the State Department pronounced: "No darker picture exists anywhere of what in more progressive countries we choose to call corruption and exploitation." Walmsley assailed the debt merchandising system, with its "century-old tentacles stretching up all

the thousands of tributaries feeding on the body of the seringueiro," but was no less sparing of U.S. policymakers for blindsiding local merchants with long experience and advancing social welfare policies that aimed to instill a profit motive in indentured tappers. Insistent on the "futility of reform by outsiders" in the Amazon, he recommended rapid scaling back of Rubber Development's operations and devolution to Brazilians of the remaining developmental, financial, and commercial functions of the rubber program.[26] U.S. author Henry Albert Phillips assailed Brazilians' failure to create rubber plantations in the Amazon as reflective of national character as a whole: "Brazilians," he affirmed, "are not realists, and never will be, to anything like the same degree that Anglo-Saxons can be and often are."[27]

Similarly, following a two-month "fact-finding" tour to Latin America in 1943, Republican senator Hugh A. Butler of Nebraska alleged that the United States had spent $500 a pound for rubber in a "sordid picture of waste and disappointing results." In one radio address, he charged: "Has any Government agency ever put out an official release describing our rubber fiasco in the Amazon Valley, where Washington sent millions of tin cups, millions of atabrine [anti-malarial] tablets, millions of dollars worth of supplies for tens of thousands of men, but failed to get men to go into the valley to work. . . ." And in a broader swipe at Roosevelt's Good Neighbor policies, Butler's article in *Reader's Digest*, "Our Deep Dark Secrets in Latin America," denounced the "hemispheric handout" of six billion dollars on a "whole collection of imported ideas" that Latin Americans would "throw out the window as soon as the spending stops."[28]

There were, in fact, many "deep dark secrets" in the wartime Amazon. According to one American author's estimate, the Vargas government's agreement to sell rubber at a fixed price to the United States rather than on the open market—where it might have sold at one to four dollars a pound—resulted in a financial loss of between $66 and $264 million for Brazil.[29] Another "fiasco" entailed the RDC's admitted failure to place purchasing orders early enough in 1943 to take advantage of the high water levels to stock adequate goods at the upriver points "so as not to get caught short" during the dry season.[30] Thus, although by June 30, 1943, the RDC had imported about 58,232 short tons of supplies and equipment for the Amazon rubber program, and another 15,632 metric tons of staple foodstuffs and supplies from southern Brazil, stalled transport between Belém and Manaus and the rubber zones left many seringalistas empty-handed, and forced tappers to spend more time hunting and fishing.[31] As

U.S. technicians bluntly stated, "No food, no shotgun shells, no cups, no basins = no work, no rubber."[32]

Another not so open secret in Washington acknowledged that the Brazilian government instrumentalities responsible for the rubber program had been created not to ensure their effectiveness so much as to "make it possible for RDC gradually to turn over its activities in Brazil to these agencies."[33] Numerous internal memoranda of Rubber Development detailed the inability or disinclination of SAVA to coordinate upriver food shipments, or to enforce price controls for tappers, since municipal prefects served as the agency's representatives in upriver towns.[34] One Amazon mayor who did respond in November 1944 to complaints about high resale prices called for evidence of excessive charges, such as sales notes, but given that tappers feared losing credit with suppliers if they came forward as claimants, the investigation went nowhere.[35] Muffled as well in official U.S. pronouncements were protests from tapper José Cândido Ramos and hundreds of extractivists and bosses in Eirunepé that the RDC's discontinuation of subsidized goods had resulted in "exorbitant prices for merchandise in this region that eliminated the advantages from higher rubber prices and impaired increased production."[36]

Perhaps one of the most symbolic wartime cover-ups, however, surrounded the circuitous voyage of an Amazon rubber *péla* to Washington. In October 1944, seringalista João Lopes da Silva from the Purus River delivered a thirty-kilo ball to RDC field technician John Wilde as a gift to President Roosevelt. Wilde carried the ball downriver to Manaus (more than a monthlong journey, since he made over 140 stops to inspect rubber properties along the way), and conveyed Silva's request to RDC president Francis A. Truslow. In his letter to the White House, Truslow wrote: "The fact that a seringalista 2,000 miles up the Amazon River has viewed rubber production as his part in war and has wished to symbolize it by the preparation and presentation of a special ball to the President is descriptive of the type of relationship between our two countries essential to the conduct of our extremely difficult rubber procurement program." Truslow offered to have Wilde deliver the rubber to the president, or even to bring the seringalista to the White House to present his wartime offering.[37] But upon the State Department's recommendation that such publicity was unbecoming in view of "existing uncertainties over long-range plans for rubber development in this Hemisphere," the White House demurred.[38] Tucked away in a corridor of the RDC in Washington, Amazonian rubber had been literally relegated to the sidelines of U.S. politics.

The slapdash foray into the forest, spurred by perilous overreliance on Asian markets to sate mass rubber consumption, fit poorly with the triumphalist narratives of an industrial superpower. The dialectic model arraying the United States and Latin America at opposite poles of a purported universal historical continuum consigned dependency and underdevelopment to the nations south of the Rio Grande.[39]

As Fernando Coronil notes, dominant historical narratives have cast modernity as emanating from the United States and the "West," rather than recognizing the role of "peripheral societies" in the constitution of the West as a participant in global capitalist development, and the role of capitalism as a global process that mutually forms centers and peripheries.[40] Shifting U.S. industrial demand for Amazonian rubber would shape the wartime histories of both regions, albeit in profoundly unequal measure. Government investment in the wartime Amazon would not redress the inequities of the rubber trade or upend patterns of extractivism and subsistence that derived from local systems of knowledge and management of natural resources. But it would introduce new modes of politics, technology, and investment into the Amazon. If during the war Brazil emerged as the darling of the United States in Latin America in exchange for its multilateral collaboration—netting more than 70 percent of the total Lend-Lease aid to Latin America, $74 million in Export-Import Bank loans, and achieving an annual growth rate of exports of 12.1 percent between 1940 and 1945—the consequences for the Amazon were likewise significant.[41] In conjunction with the Brazilian government, the United States invested $10 million to boost infrastructure alone in the Amazon—the equivalent of $110,490,000 for the year 2000.[42] U.S. financial and technical support paved the way for the establishment of a state bank committed to regional development. It also enabled the creation of a vast public health network and sanitation of the Amazon's larger cities, construction of an airport in Manaus, the influx of tens of thousands of workers, and set a precedent for postwar development aid and social welfare programs. These were small steps in a giant region, but they portended that the nature of the Amazon would never be the same as before, notwithstanding old-time perceptions of timeless landscapes.

II. Bosses and the Battle for Rubber

During World War II, U.S. officials carped that despite the availability of public credit, discounted goods, and subsidized labor, Amazon bosses showed reluctance to "meet our war needs" and "lack of foresight, or any

ideas involving change for the better."[43] Yet what outsiders lambasted as cultural blinders, bosses understood as the risks and opportunities of forest trade. Socioenvironmental constraints in rural Amazonia had conditioned seringalistas to financial risk aversion, and to time-tested revenue-earning strategies and methods of social control.[44]

With cold calculation, for example, bosses long linked the cost-effectiveness of contracting northeastern rookies to the challenges of acclimatization. Due to death and illness, migrants' first-year rubber yields were projected at 30 percent below average; inexperienced tappers were also faulted for damaging tree bark.[45] Among the naysayers were M. A. da Silva Retto, who seethed that four months after installing thirty-five nordestinos on his seringal on the lower Juruá, five had died, eight were sick, seven had fled (stealing two canoes and some equipment), and only a handful of those remaining were earning their meager rations of dried fish and farinha.[46] Likewise, Cirilo Rodrigues complained that nine of the twenty nordestino migrants placed on Seringal Bom Futuro refused to cut rubber upon arrival, returning the same day to Porto Velho; of the remainder, five subsequently ran away (two of whom carried off shotguns).[47] Of course, it behooved rubber bosses dodging creditors to blame production shortfalls on their workforce. Yet as the RDC noted of bosses' prospective labor costs: "A laborer who has been transported to a seringal, assigned a house and two estradas, advanced food and equipment totaling CR$1,500 [$75] to CR$3,000 [$150] may decide after a short period of time that he cannot produce sufficient rubber to liquidate his credits and acquire a cash surplus. In such a case, he either stopped work, voluntarily left, or was asked to leave the seringal."[48] Thus, as early as September 1942, RDC field technicians reported that notwithstanding a labor shortage, many bosses refused to place migrants on existing rubber trails.[49]

Gender factored into the labor selection process as well: not the virtue of rubber "soldiers," but the specter of bandits, city-slicking bucks, and vagabonds rounded up by the Ceará police.[50] On the Jutaí River, seringalistas complained that over eighty men from the migrant labor camp at Fonte Boa "took the town," drinking, brawling, and terrifying the locals.[51] Other bosses deemed the sign of "good labor and good relations" on the seringais "when a man will take his woman, whether it is his wife or not, [because] it is a pretty good indication that he will stay and that he will work."[52] Although U.S. officials had pressured the Brazilian government to recruit unaccompanied men in order to boost rubber production, they

subsequently conceded its "fundamental error," since bosses mistrusted them and migrants "missed their families, wives, sweethearts, and fiancées."[53] Whether partnered migrants would have been more acquiescent workers is questionable, but bachelors' perceived propensity for mischief only reinforced their potential liability in bosses' minds.[54] Tellingly, bosses never spoke of wartime migrants as rubber "soldiers," but rather in traditionally pejorative terms—*bravos* [wild ones] or *arigós* [migratory birds]—and even begrudged that "the government had dignified them with the title of 'soldados da borracha.'"[55]

Rubber bosses appear to have favored local laborers and former hands as tappers. Seringalista Albino Henriques's help wanted ad of October 1942, for example, stated that he "preferred persons experienced in this type of work who are already residing in the [upper Madeira] region."[56] And on the Rio Negro, Sebastião Nilo Guerra noted that two years earlier he had dismissed his workers, "counting that I might go fetch them, as is customary."[57] Moreover, numerous documents allude to locals drawn to the seringais by higher wartime rubber prices and a rising cost of living exacerbated by disruptions in transportation, diminished agricultural production, and the influx of government officials and northeastern migrants.[58] In Manaus, which experienced frequent shortages of food and electricity, employers groused that the rush to the seringais left behind "only those workmen of the poorest caliber" (see figure 5.2).[59] Likewise, the director of the Madeira-Mamoré Railroad slammed "unscrupulous recruiters" for luring 250 rail workers to the seringais during the previous six months, disrupting train service.[60] Waldemar de Almeida, born on a seringal on a tributary of the Jaci River in 1922, was one such worker: he left his job on the Madeira-Mamoré in 1942 to tap rubber on the Abunã with his father. Nearly a half-century later, Almeida recalled that as an experienced tapper he had produced a large yield at Abunã—which made "the few women who were there also interested in me"—but was forced to flee after one year by a pugnacious colleague resentful of his success with the opposite sex.[61]

To be sure, "local" seringueiros were often nordestinos, but many had been brought to the Amazon under individual contracts with established commercial firms rather than by the federal government.[62] Nor were local tappers necessarily more compliant than newly arrived migrants. As seringalista Henrique de Oliveira Bastos griped in November 1942, with higher wartime prices for rubber enabling earnings in half the standard work time, not even "ingenious" threats of military conscription

Figure 5.2 Due to the wartime scarcity of male laborers in the urban centers of the Amazon, women and girls found employment in the rubber cleaning mills in Manaus, where conventional female dress gave way to shorts and overalls. *Source*: National Archives.

could induce additional tapping.[63] Conversely, bosses on the Iaco River had few complaints with the hundreds of newcomers from Ceará and Rio Grande do Norte, while migrants on the Curuça River reportedly were "turning out to be even better seringueiros than some of the older ones"[64] (see figure 5.3). Nevertheless, some technicians believed, because migrant labor was "better informed" than old-timers and might destroy the "present profitable system" on the seringais, bosses only wished to contract them in "small doses," and "unmixed with old seringueiros."[65] In this sense, employers did not worry so much about compliance with

Figure 5.3 Migrant workers embarking upriver for the rubber areas. *Source*: National Archives.

the official tapping contract—which they violated with impunity—as the prospect of hiring new, untried labor recruited through government channels.[66] By February 1944, U.S. officials glumly concluded, "sooner or later some Agency in Washington will demand an explanation as to the failure to place recruited labor on rubber producing properties in the Amazon Division."[67]

Even a budding entrepreneur, however, might have been deterred from expanding rubber production by wartime conditions. Bosses received 33 percent of the net price of rubber, but since they were often lessees, and had to pay for interest on loans, freight costs, taxes, commissions, and start-up costs for new tappers, their profit upon sale to the Banco de Crédito da Borracha might amount to as little as 4.5 cents per pound.[68] Premiums of 33.3 percent that had been added to the official rubber price in February 1944 were guaranteed for only two years.[69] Moreover, the turnaround in the Allies' favor by mid-1943, publicity on the synthetic rubber industry, and closure of RDC warehouses in the Amazon in 1944 gave bosses additional pause.[70] As one U.S. technician observed: "These men recall the collapse of the old rubber boom. They can visualize the

same thing happening again and they cannot be blamed for being cautious. They are not in the rubber business for patriotic reasons. They are after the 'Almighty Dollar' and, if we want rubber as urgently as we say, we had better give it to them."[71] Rubber bosses had conducted business in the Amazon too long to be swayed by the entreaties of wartime interlopers to overhaul its very nature. Contemporary crusades against Amazonian deforestation that offer scant or short-term material incentives to local residents confronted with economic opportunity or need risk meeting the same fate.[72]

WAR PROFITEERING IN THE FOREST

The Amazon forest, indeed, meant something else to wartime bosses: Hevea trees offered new opportunities for financial gain, both lawful and illicit. In 1943 alone, smugglers transported an estimated 1,500 tons of rubber into Bolivia on small boats for resale in Argentina (left empty-handed by the global crisis) at 100 percent more than the official price in Brazil.[73] Loans from the Banco de Crédito da Borracha (BCB) for rubber production financed debt-merchandising, and unlawful mark-ups on state-subsidized goods generated handsome revenues.[74] Workers were fleeced for transport upriver, fined, assaulted, and shortchanged on their contractual percentage of rubber proceeds.[75] Vast distances, remote locations, and government inaction enabled infractors to act with impunity.

By August 1944, for example, the BCB had extended to rubber bosses more than 700 loans totaling over $183 million cruzeiros.[76] Credit was proportional to the size of the workforce, with bosses typically eligible for an average of two to three thousand cruzeiros per seringueiro working on existing trails, and three to five thousand for seringueiros involved in the expansion of existing properties.[77] The bank officials' inability to monitor compliance over extensive territory, however, facilitated fraud.[78] (Bosses, on the other hand, complained that the bank's conservative lending policies stymied production.[79]) Thus, in the Portel region, only three of eight borrowers had reopened trails with their loans; the other five had used them for refinancing, to purchase merchandise, or to buy boats to operate as peddlers.[80] Similarly, technician Harold Gustin slammed "pseudo-seringalistas" who diverted bank loans to build up trading businesses and then blamed alligator hunting for compromising tappers' output—even though the nighttime undertaking did not compete with latex extraction and served to supplement paltry diets and earnings.[81]

Shunting new tappers to less productive trails for their forest appren-

ticeship was another tried and true recourse of bosses.[82] On the Japurá River, Romano Barosa claimed in his loan application to run a seringal with 86 men and 300 open estradas, but RDC technicians reported that Barbosa only had 33 seringueiros at peak production—all migrant workers who had been underfed, overcharged, and forced to open their own trails in violation of the official tapping contract.[83] Likewise, on the Seringal Santa Cruz on the Candeias River, RDC technicians reported that four Cearenses who lacked tapping experience or on-site training had been placed on trails with exhausted Hevea bark, requiring the use of ladders to reach higher up on the trees. Another had gotten lost in the bush for four days, cut his hand, and suffered from a serious infection. As their debt mounted, the men asked the manager to open up new trails for them.[84] Opening estradas was customarily done by a *mateiro*, who located the trees—marking out perhaps four trails per month—and two *toqueiros*, who hacked the brush and cleared the crooked loop that connected them.[85] While an experienced seringueiro might be able to open a few estradas close to a river, a mateiro's services were essential inland and hard to come by during the war.[86]

Price gouging, however, offered the standard method to maximize investment returns. Wartime accords barred traders from charging more than a 15 percent markup on RDC goods, but neither the large urban commercial firms nor seringalistas distinguished between the sale of state-subsidized materials and those from other sources. On the upper Acre, for example, only two seringalistas abided by the RDC list price, while in regions of Pará, government-supplied goods sold at prices of 200 to 400 percent of wholesale, with nothing under a 100 percent markup. As an RDC senior field technician quipped: "For a long time we used to quote the prices we encountered on the river until I finally told the field men not to bother. Affidavits and sales slips are articles which are not given by people who have to remain on a river. My opinion is that SAVA and Rubber Development Corporation both know that nothing can be done but for the sake of appearances continue to go through the motions. I recommend that we now dispense with the motions."[87] While wartime profiteering pervaded Brazil as a whole, often involving high-level government officials, bosses and traders in the Amazon had married traditional methods of natural resource management with new-found openings for economic gain.[88]

For bosses, wartime opportunism and patriotic fervor were not mutually exclusive. As the Trade Association of Amazonas (ACA) affirmed in

1943: "Linked to the seringueiro by a profound human solidarity, and by an understanding of the effort that both must expend on behalf of the economy of the State and the cause of the Allies, the seringalista plays an exceptional role in the move to increase rubber production."[89] Indeed, at the ACA ceremony in June 1944 to award the state's top producing tappers, many seringalistas were in attendance, along with local politicians, army officials, clergy, and foreign diplomats.[90] Yet whether born of conviction or convenience, bosses' participation in the rubber campaign aimed to reinforce their political power and social standing in the Amazon amidst tenuous control over labor and the natural environment.

In the aftermath of the war, Amazonian elites rallied in defense of their region. Yields had fallen short of expectations, Luiz de Miranda Corrêa wrote in a short history of the rubber campaign, but he could affirm that "we clearly achieved the objectives of rubber production vital for the needs of war and Allied industry." Moreover, the episode confirmed that "an organized and well planned effort can modify the Amazon region," once more demonstrating that "ever since the colonial period, the European had shown a capacity to adapt to the Brazilian tropics. . . ."[91] With similar resolve, Amazonian politicians fended off congressional inquiries in 1946 into the fate of the "rubber soldiers": since many seringalistas were of northeastern stock, receiving their "brethren" with open arms, migrants who remained incommunicado were either living the high life or had been undone by their own indiscretions.[92] Where local pride swelled, and yearnings for federal assistance ran deep, elite admissions of misdoing in the "Battle for Rubber" were unbecoming.

The true victim, the ACA charged, was the Amazon region, whose resources had been "sacrificed" to opportunistic outsiders.[93] Manaus dailies blasted the RDC for wasting millions of dollars and doing little for long-term rubber output.[94] And in the national congress, representatives from the northern states denounced "semi-colonial" economies that were consigned to furnish cheap primary goods and consume high-cost industrial products from the United States and southern Brazil.[95] But Amazonian elites particularly blamed northeastern migrants. Agnello Bittencourt, president of the storied Instituto Geográfico e Histórico do Amazonas, lambasted the "vagabonds and unadaptable ones who were mixed in with the honest men willing to work . . . It is not with the former element, those of the worst type, that Amazonia needs to be populated."[96] And Agesislau Araújo, of the J. G. Araújo firm, claimed that the problem boiled down to northeastern men misbehaving during the war. Thou-

sands of single men had ravaged the region and then retreated, depriving the Amazon of a "permanent population" that would "take pride in improving the resources, not merely tapping them."[97]

Such narratives exhibited considerable casuistry. Agesislau Araújo, for one, surely knew that speculation, rather than connubialism, was the key to economic success in the Amazon: during the war, the U.S. consul in Manaus noted that Araújo had diverted funds from rubber production to rosewood oil, stockpiling a hundred tons of the perfume for postwar markets. As the diplomat noted, Araújo was not anti-American; he had merely ignored U.S. officials' exhortations to remake the forest at their behest.[98] Yet the defamation of migrants' character has proven an enduring explanation for the Amazon's woes. Although state-directed colonization of the Amazon in the 1970s and 1980s often collapsed due to smallholders' lack of credit, social services, and market access for crops, officials blamed migrants for their own misfortunes.[99]

Whether clad as wartime victors or victims, Amazonian elites tailored narratives to secure long-term government subsidies.[100] The efforts bore fruit. To stave off collapse of the wild rubber trade upon the expiration of the fixed wartime prices in 1947, the Brazilian Congress created the Comissão Executiva de Defesa da Borracha. The commission, comprising representatives of the rubber goods industry, seringalistas, and the Rubber Bank, established a minimum price of eighteen cruzeiros per kilogram for rubber until December 1950.[101] Government subsidies for Amazon rubber producers would be extended for decades in conjunction with a raft of federal initiatives in the region. The Amazon "question" had become deeply federalized in Brazil, even as local elites continued to claim the bragging rights to exclusive understanding of its nature.

III. Migrants and Tappers: Work in Nature

His body weakened by years of forest labor, João Monteiro de Souza began an interview with me in 2001 recounting how he had contracted malaria at the Seringal Porto Alegre. "Everyone got sick," he noted, "even the seringalista." Souza also told of a recent operation to correct his eyesight, damaged by smoking rubber and tapping in the wee hours; showed me the marks from a snakebite on his pinky, sustained while clearing brush on a trail, that left him permanently unable to bend the finger; and pointed to the scar on his foot from a hatchet that had slipped from his hand as he was cutting *cavaco* (palm nuts) for his smokehouse.[102] His body map chronicles how the struggle over Amazonian resources as-

sumed distinct forms and meanings for the region's laboring classes.[103] For tappers working in nature, life and livelihood hinged on the vicissitudes of the tropical forest; the availability of food, supplies, and medical care; the productivity of rubber trees and access to peddlers and urban markets; and relationships with bosses and peers. Off the seringais, individual histories were contoured by patterns of subsistence agriculture and insertion into urban labor markets, and by migrants' willingness or capacity to return home.

For bodies exposed to nature's furies, mortality rates were staggering. Although we lack official data for casualties in the Battle for Rubber, Warren Dean claims that between 17,000 and 20,000 migrants died, a percentage of 30.9 to 36.3 that jibes with wartime reports of newcomers' attrition rates in Acre owing to death and illness. Other wartime observers estimated a mortality rate of 10 percent for migrants during their first year in the Amazon.[104] Many migrants succumbed to malaria, particularly the most malignant form caused by the plasmodium falciparum protozoan parasite, transmitted by the female *Anopheles darlingi* mosquito. Virulent in populations lacking previous immunity and chronic among survivors, malaria's signature symptoms of high intermittent fevers, chills, and exhaustion augment sufferers' vulnerability to malnutrition and hunger, as well as other pathogens. Malaria represents a difficult epidemiological challenge in the Amazon not only because of its highly variable expression in human populations, its relation to mosquito vectors, and its geographical dispersal but also because of its relationship with human agency amidst conditions of great socioeconomic precariousness. Poor living conditions, the influx of thousands of newcomers without previous immunity, and the mobility of the workforce linked to extractivist cycles and flight from infected areas have contributed to the spread of the disease.[105]

Consonant with the colonial practice of tropical medicine, U.S.-backed malaria control programs in the Amazon aimed to increase labor productivity, and to protect troops and government officials in insalubrious zones.[106] Prior to the advent of DDT, an insecticide developed during the war and first applied in the Amazon in the town of Breves in 1945, malaria control efforts in the valley focused on disruption of the reproductive cycle of the anopheles mosquito and the distribution of antimalarial medication. The former strategy, which entailed drainage projects, indoor spraying, and rigorous application of Paris green larvicide on water surfaces where insects deposited their larvae, was adopted by SESP in urban centers in the Amazon.[107] In Belém, for example, where U.S. mili-

Figure 5.4 Official from SESP spraying oil to eliminate mosquito larvae near Belém. *Source*: National Archives.

tary officials prioritized malaria control due to the stationing of American marines at the airbase at Val de Cans, SESP spent over $500,000 to install ditches, dykes, and automatic tide-gates to control flooding of low-lying zones, sharply reducing the breeding of mosquitoes in and around the city and incidence of the disease (see figure 5.4).[108] Likewise, in Porto Velho, whose calamitous rates of malaria gained international notoriety earlier in the century at the time of the construction of the Madeira-Mamoré railroad, SESP would make strides in sanitary engineering, undertaking municipal drainage works, demolishing small hills, and filling in extensive depressions.[109]

In the countryside, however, malaria control was bedeviled by the widespread distribution of anopheles, the impracticality of draining or

larviciding immense floodplains, and the futility of indoor spraying in the open-air, thatched roof huts of tappers. Thus, the SESP focused on free distribution of atabrine, a synthetic antimalarial that served as both a prophylactic and curative. Atabrine was manufactured and distributed by the U.S. government in the wake of Japan's seizure of Javanese cinchona plantations, the quinine-producing trees that had furnished the traditional antimalarial.[110] By October 1943, SESP had given out 12.5 million atabrine pills in the Amazon.[111] A staff of 2,893 Brazilians and 65 Americans ran the agency's thirty health centers and medical posts in the region, which received an estimated 170,000 visits during their first year, and operated over forty boats as floating dispensaries.[112]

Nevertheless, tappers' geographic remoteness and mobility, the difficulties of river transport and shortages of health personnel, and seringalistas' illegal sale of tablets stymied the rural distribution of atabrine.[113] Atabrine's gastrointestinal disturbances, exacerbated by administration on an empty stomach, undoubtedly also discouraged experimentation or long-term use, as did users' development of yellow pigmentation (although clinical tests deemed this side effect harmless and not associated with disturbance in liver function).[114] Popular perceptions of medicine and disease may have also played a role in compromising the pills' efficacy: doctors sneered at patients' "suspicions" and misuse of the medication, or their preference for injections, purgatives, or a "good woman (or good man) who knows a magic prayer and blessing which will offset all physical troubles for a few cruzeiros."[115] Health officials were loath to acknowledge the efficacy of native pharmacopeia and the chronic paucity of Western medicines that may have prompted such "suspicions"; or the fact that malaria was but part of an everyday range of diseases that residents of the Amazon battled (with tuberculosis, in fact, the leading cause of death among adults in Pará during the previous decade).[116]

Ultimately, rubber workers' very potential to receive atabrine diminished with U.S. downgrading of the Amazonian campaign after mid-1943. From 12.5 million atabrine tablets given out between June 1942 and October 1943, the SESP distribution of atabrine dropped to 5.2 million pills between October 1943 and December 1946.[117] At the SESP health center in Porto Velho, for instance, the distribution of atabrine tablets fell from 348,831 in 1943 and 228,119 in 1944 to 28,790 in 1945.[118] The precipitous decline also reflected the demotion of a prophylactic medication deemed by health officials as unlikely to have a lasting preventive impact on local conditions in favor of broader-based public health and sanitation

measures, such as improving water supplies, food sanitation and nutrition, and excreta disposal.[119] Amazon towns, with greater demographic concentrations and availability of medical personnel than the countryside, posed fewer logistic challenges for public health programs, as well as greater payback for politicians.

Yet among the 1,462,429 residents of Amazonas, Pará, and Acre registered in the 1940 census, three-fourths of the population lived in small communities dispersed along the region's rivers, where they were highly vulnerable to a range of diseases.[120] One such victim was José Alfredo Leite Araújo, who came to the Amazon from Rio de Janeiro at the age of thirty-six with the first SEMTA dispatch in January 1943. Six months after being placed at the Seringal Pacaás Novas, he contracted malaria. Araújo made his way to the SESP clinic in Porto Velho, joining scores of fellow sufferers: half of the 3,002 patients treated at the town's dispensary in 1943 had contracted the disease, while another 30 percent battled parasitic infections.[121] Returning home to Rio, Araújo leaned on his brother for financial support, imploring Vargas (with apparent unsuccess) for state assistance in return for his "patriotic duty."[122]

Countless others suffered in obscurity. In 1945, of the 2,160 migrants that the DNI shipped back to the northeast, 804 had been stricken by malaria; the following year, of the nearly 3,000 nordestinos sent home, 80 percent were sick.[123] As one wartime migrant recalled of the lack of Western medical care on the seringais: "We cured illnesses with a pill named the 'safe bullet,' which served for fever, worms, itches. We had no penicillin, we had nothing."[124]

STRUGGLES IN THE FOREST

Amidst widespread conflicts over access to resources in the forest, tensions racked the wartime Amazon. For example, after two months working at Seringal Santa Cruz upon their arrival from Ceará, Raimundo Rodrigues de Sousa and Francisco Alexandre da Silva demanded to see their balance. The manager, Roberto de Sá Nogueira, ordered them back to work "even if he had to force them." When Sousa retorted that "he had never met a man who had forced him to work," Nogueira fatally shot him in the chest. Da Silva fled to Porto Velho where he denounced the murder to the police. Nogueira died shortly thereafter, although the cause was not listed on the death certificate.[125] Similarly, technician Frederick Vogel noted of the upper Purus in July 1944: "On several seringais the laborers spoke seriously to the writer about armed revolution but this was quickly

talked down with explanations of its fatal consequences, its adverse effect on the war effort, and its futility."[126] The revolution did not occur. But workers on the rubber properties tangled with bosses, voted with their feet, strained government instrumentalities, and invoked patriotic and legal claims for social justice, striving to shape nature and society in the Amazon according to their visions.

Knowledge of flora and fauna, whether homegrown or newly acquired, ensured physical survival, while traditional forms of forest resource management and subsistence practices condemned by government bureaucracies compensated for high-priced or scarce supplies. As RDC functionary Francis Rebelo noted, the exorbitant price and shortage of consumer goods on the Purus River gave tappers a "natural reason" to turn to agriculture, hunting, and fishing.[127] Or as another technician commented: "The seringueiro, illiterate but no dummy, has figured out his own answer" to price gouging: "he goes fishing."[128] And as technician Harold Gustin observed of the Negro River's workforce, which hailed primarily from the Solimões and even Manaus: "They seem perfectly aware that if they go into debt there is nothing that the patrão can do to collect it and in the meantime as long as he provides them with food, they will produce as much rubber as conveniently possible. Last season they all ended up in the hole. If they get out of debt this year, fine, if not, they can end up the season owing money which they know their creditor cannot collect and in the meantime they had room and board, such as it was."[129] In other words, workers had imparted distinctive meanings to Amazonian nature based on long-held practices and adaptations.

More than half of migrant workers also left their properties (or were presumably evicted) after a brief stint, according to wartime bosses.[130] As nordestino Alcidino dos Santos recounted his trajectory: "The boss came to get us in Manaus. I went to the Rio Tarauacá, Vila Seabra. There were four shacks. I stayed there only three months because the boss wanted to humiliate us, making us carry excessive weight, like an animal. I said no, I am not a donkey or a mule."[131] Notwithstanding the exhortations of RDC labor advisor Georges Rabinovitch that Brazilian officials enforce migrants' "strict obligation to work" in light of exemption from military duties, or technicians' insistence that tappers might be "induced or *forced*" to tap more regularly since "Brazil is also in this war," the Estado Novo lacked such coercive power in the rural Amazon, which would have been anathema in any event to progressives in both nations.[132] Thus, while revisionists have decried the Vargas regime's nonenforcement of

protectionist labor legislation in the Amazon as symptomatic of an oligarchic pact, there is also no indication that migrant-tappers who violated or voided their contracts were prosecuted.

To be sure, tapping remained a viable livelihood for those blessed with more favorable conditions. Reluctance to suspend tapping during the dry season, for example, may explain why only four of Amazonas's twenty-eight top producers came to Manaus in June 1944 to collect their cash prize from the ACA.[133] Antonio Carolino, who amassed a hefty 1,065 kilos of rubber on the Seringal Manarian on the Juruá River, turned down the trade association's "distinguished invitation" because he was "producing rubber" and did not "wish to leave the seringal."[134] Manoel Paulo too stayed put on the Seringal Redenção, hoping to double his whopping record of 1,848 kilos the following year.[135] And Mayor Nelson Noronha noted that the rubber fever gripping the region of Benjamin Constant had "most of them [seringueiros] ready to dispute the new prizes that they hope the Association will award the champions of rubber production in the current harvest."[136]

Although Francisca Nobre de Melo's husband did not win a prize, in her eyes he too was a champion. Migrating from Ceará to the Amazon in 1943, her husband "came here to work to see if he could earn something. He came here, he earned. He was here for 10 years . . . and earned money, that was a seringueiro! A worker! But it was six days a week that he used to tap. A worker that sent chills up your spine."[137] Likewise, Otávio Carlos Monteiro achieved a balance at the Seringal Sobral during the war. Twice weekly, for over a year, Monteiro toted a 40–50-kilo ball of rubber on a 3- to 4-hour walk to Sobral's riverside trading post, before moving on to tap in the Abunã region. Decades later, living in Manaus, he reminisced that the geographic distance of his encampment [*colocação*] at Sobral from river peddlers imposed an obligatory thrift. Praising the Lord for having protected him, and Getúlio Vargas for granting free passage from Ceará, he insisted that only those migrants who had imagined they would get rich quick had been disappointed tapping rubber.[138]

Such modest success stories clash with dominant representations of the populations and landscapes of the Amazon and the northeast, which, like other narratives of peoples and places at the margins, traffic in tales of dysfunction and disaster. The protagonists' accomplishments are little known outside family circles, lacking the requisite flash for rags-to-riches legends, critical documentaries, or telenovela storylines.[139] They are also difficult to quantify for migrants, since notions of success or failure were

relative to their conditions and expectations in the sending region. What we might affirm is that although personal grit and divine intervention headline tappers' own understandings of success, the ability to earn a surplus on the seringais hinged on an ungainly combination of methodical extraction and measured consumption, health and epidemiological conditions, productive trees and tapping supplies, opportunities for trade and geographic mobility, and fair treatment. Wartime technicians, for example, noted that operators supplied by large importing firms typically fared better materially than smaller seringais furnished by local merchants.[140] Moreover, on the lower Amazon, an area better served by both aviadores and regatões, tappers had greater trade options and more information on the price of goods in Manaus.[141] Even on the upper Acre, one report noted, where peddlers circulated "the rubber cutter has a chance, but where there is no competition and where control and publicity present such a geographical problem, he had little choice but to resort to basic subsistence."[142]

SUBSISTENCE FARMERS, BUILDERS OF RAINFOREST CITIES, AND FAMILIES LEFT BEHIND

Migrants' varied pathways in the Amazon reflected divergent strategies of resource appropriation. While many struggled on the seringais, some had never intended to tap rubber. Long delays in government camps, mistreatment by bosses, rumors of Indian attack, encounters with infirm returnees, or alternative employment opportunities might also have prompted a change of heart. In early 1942, for example, U.S. and Brazilian officials reported that drought refugees were being sold like "human cattle" to the "highest bidder" in the Amazon.[143] Or as a newly arrived immigrant to Manaus stated: "I was getting some information from some *mansos* there in Ceará, and they told me about this business of tying the customer to the [tree] trunk just because he asked [the boss] for his balance. I don't like oppression, and they told me that the rifle rules there. I am an honest man. I am not going to those [upriver] places."[144] The U.S. consul in Belém even reported a first-hand encounter with one such "deserter": a plumber that he hired turned out to be one of the "rubber workers" recruited in Rio de Janeiro.[145]

Indeed, of the 10,123 workers transported to the Tapanã camp in Belém by September 1943, only 32 percent had been directly placed by SAVA on seringais, and another 29 percent through "other mechanisms." Similarly, a 1943 SESP report estimated that of the 10,396 men delivered

to SAVA at Belém only 4,140 had been placed on the seringais; another 12 percent had deserted at Belém, with 3 percent returning to the northeast.[146] And an RDC survey taken from March 1943 through June 1944 found that of a total of 16,894 arriving at the camp in Belém, 13,812 had been shipped upriver, yet the agency could only confirm that 9,416 had gone on to Manaus, 1,212 had entered Guaporé territory, and the remainder had presumably scattered among points in Pará and Amazonas.[147] In his confidential report of April 1943 to Vargas, Reinaldo Reis conjectured that the number of migrants shipped upriver might have been considerably higher—perhaps 10,000—if some of the workers had left Belém and Manaus on private boats.[148]

The wartime economic boom spawned great demand for labor throughout the Amazon Valley. Of the 9,173 nordestino families transported by the DNI to the Amazon through March 15, 1943, for instance, more than half (4,888) reportedly went to the Bragança agricultural region near Belém, where many once lived or had relatives.[149] Similarly, on the Rio Tapajós, technicians reported in December 1943 that not more than 20 percent of the 250 or so workers brought in were cutting rubber: at least one-fifth had purportedly left the region, while the remaining 60 percent worked in agriculture and public works.[150] In view of wartime food shortages in the Amazon, U.S. officials reasoned, the diversion of workers to agriculture was not entirely out of keeping with the general rubber program, but little could be done anyway to deter such determined agriculturists.[151] The DNI office in Manaus, for example, reported that newly arrived migrants had insisted upon farm work, notwithstanding their contractual obligations to tap rubber, and while authorities convinced some to head for the seringais, others simply deserted the camps "without giving us the slightest warning."[152]

Aside from agriculture, local business, and industry, workers were needed in the construction activities of the RDC; at the U.S. army base in Belém (a key hub in the aerial network linking Miami to Natal and the city's single largest employer of manpower); at the city's wharfage, cranes, tugs, floating dry docks, repair shops, and marine railways; in the public utilities of Belém and Manaus; on the Madeira-Mamoré railroad; and in public health and drainage projects.[153] For example, in Porto Velho, whose population of four thousand witnessed a boom in construction and sanitation projects under Governor Aluízio Ferreira, migrants furnished much of the labor: according to a local history, the SAVA camp in Porto Velho received 4,961 workers (see figure 5.5), placing 1,786 on

Figure 5.5 Migrants arriving at Porto Velho. The inscription under the bust reads: "In Porto Velho every worker is a soldier and every soldier is a worker with the common objective of working for the greatness of the nation." *Source*: National Archives.

seringais, 1,002 on public works, 434 in agriculture, and 503 in "other services."[154] One such migrant was José Mariano de Souza who, in February 1943, at the age of eighteen, left behind his thirteen siblings in Quixeramobim, Ceará. After a month-long delay in Belém, Souza embarked upon a twenty-eight-day journey upriver to Porto Velho, learning en route about the "work of the soldados da borracha when we [the boat] stopped to get firewood, and didn't like it." Souza found work on a SESP drainage project in Porto Velho and later enlisted in the newly created Guarda Territorial of Guaporé in Guajará-Mirim in 1944 at a monthly

salary of 600 cruzeiros. He married there, fathered three children, and worked for the constabulary for the next eighteen years.[155]

The competition for common and skilled labor in the Amazon led wartime workers to shop from one government agency to the next, fueled a steady rise in the pay scale, and provided an outlet for tappers inclined to void their contracts. In May 1943, representatives of U.S. and Brazilian agencies involved in the Amazon (including the Airport Development Project, the U.S. Engineering Department, the Navy, RDC, SNAPP, and SESP) called for sharing information on labor requirements, coordinating pay scales, and reducing demand for labor so as to preserve workers' primary interest in the collection of rubber and avoid disorganization of the local economy.[156] Yet as the U.S. consul in Belém noted, since labor and materials in the Amazon were also needed for Brazilian organizations, public utilities, construction, and local businesses, U.S. officials could only go so far in their demands.[157] And while U.S. agencies aimed wherever possible to use migrants' services, many workers understood their relative bargaining power. At the SAVA camp in Manaus, for example, workers awaiting placement upriver received a wage of six cruzeiros daily and an additional three cruzeiros when they worked on construction of the airport nearby; yet some demanded twelve to fifteen cruzeiros per day for labor outside the camps, informing government officials that their contracts did not oblige them to work while in transit.[158] "Since our only sanction against them would be to dismiss them (which would not be in our interests)," a U.S. official concluded, "we recommend that migrants employed for work other than rubber-tapping be paid whatever salary is consistent with local conditions."[159]

Northeastern migrants laboring on public works in Manaus, Belém, and smaller towns had become *cassacos* in the Amazon. Their physical labor propelled the expansion of urban infrastructure, sanitation projects, ports, and airfields in the region (see figure 5.6). Although just as in the northeast (or in Brazil's southern metropolises) there are few official monuments to honor their hard work, they were modernizers of the "rainforest cities" that today account for nearly three-fourths of the Amazon's population. Through self-help housing, they also gave rise to new neighborhoods in these urban centers, typically in marginal or malarial zones. In Porto Velho, which today boasts over 400,000 people, the neighborhood of Arigolândia, as its name suggests, was founded by wartime migrants—and has since become considerably more upscale. In Manaus, wartime migrants settled in the neighborhood of Educandos.[160]

Figure 5.6 Migrants erecting radio tower at newly constructed airport in Manaus, February 1944. *Source*: National Archives.

We need not romanticize as "resistance" the alternative pathways of wartime migrants in the Amazon. Work off the seringais could be just as demanding and dangerous as on them: at times as many as half of the laborers on the drainage projects in Porto Velho, for example, were sick with malaria.[161] In the agricultural zones along the Belém-Bragança railway, postwar visitors noted the widespread poverty and the rudimentary housing of the inhabitants.[162] In Cuiabá, a Brazilian observer in July 1944 described famished migrants roaming the streets in search of work and persecuted by the police.[163] And in Amazon cities beset by rising living costs and an acute housing shortage, poor women toiled as washerwomen and seamstresses, while countless men hustled in the informal sector because, in the words of one migrant, "that's what one who has no protection does."[164] Nor were migrants that worked off the seringais less heroic for not having served as rubber "soldiers": many in the armed forces never see active combat duty. What it does mean is that migrants struggled in various settings to remake their lives and their surroundings.

For family members who remained in the northeast, the Amazon retained distinctive meanings. It had always haunted residents less as a

geopolitical specter of empty land than a land that emptied homes of loved ones. The official recruitment contract entitled families that did not accompany the male head of household to the Amazon to a daily allowance of between two and eight cruzeiros for the duration of the migrant's journey to the seringais. Another option, which fewer families selected, was for dependents to be sheltered at government camps in the northeast, without a daily allowance. Upon arrival at the seringais, migrants could opt to remit their tapping earnings to dependents through the offices of SAVA in cooperation with competent government agencies.[165] Under a January 1943 accord, the RDC had agreed to set aside special monies for the family welfare fund, but subsequent to the midyear decision to scale back operations in the Amazon, the agency offered a lump sum of $2.4 million to the Brazilian government to cover the transportation of an additional 16,000 workers as well as the maintenance of the family welfare fund. In 1944, the Brazilian government suspended payment entirely to dependents.[166]

Official documentation sheds scant light on the fate of these family members. Since most poor nordestinas were illiterate, few could document their plight in writing. In June 1944, Vargas did receive a letter from Jovelina Luciana de Souza and other "wives, mothers, fiancées, and sisters of workers who left their homes more than a year ago, in order to find better opportunities in life in the extreme north of the country." The women protested that the recent suspension of the family welfare fund left them struggling with the "high cost of living." They also complained that the indemnification of one thousand cruzeiros provided to widows amounted to less than one-tenth the official payment for work-related fatalities under Brazilian labor law.[167] But in a stern rebuttal, the legal counsel of CAETA insisted that the agency had only been contractually obliged to support dependents while migrants were in transit to the seringais, and had already shown an "elevated spirit of humanity" in continuing to do so, particularly where men had violated their contracts by not tapping rubber. Moreover, he argued, since some migrants had died from "natural" causes, rather than work-related accidents, their widows were fortunate to have received any indemnity. In his blanket assessment of migrants' trajectories and causes of death, the lawyer dispensed with any case-by-case investigation, proposing instead the relocation of family members to the Amazon, even though he recognized that the men's precise whereabouts were unknown.[168]

It is unclear how Jovelina Luciana de Souza and her fellow petitioners

did get by after the family welfare fund that had been promised to their menfolk at the time of recruitment was suspended. The existing documentation, however, does underscore Brazilian officials' capricious application of legalistic principles to disempower the poor and their assumption that the best place for an argumentative woman was beside her man, even if he might have disappeared in the Amazon. In postwar testimony to the Brazilian Congress, Valentim Bouças, the president of the Commission to Control the Washington Accords, summed up in three sentences what had happened to family members in the government camps in the northeast: "In six months, aside from sending the workers, we were able to have the families sent to their respective heads in Amazonia. When we had no news of the workers, we returned the families to their places of origin. In a couple of months, we no longer had *núcleos* [family camps in the northeast], nor women, nor children, in other words, the agglomerations of dependents were gone."[169]

CITIZENS IN THE FOREST

During the war and its immediate aftermath, a number of tappers (or their families) invoked patriotic discourse and protective legislation to garner social respectability and government support. Tapper Olívio Brito de Sá, for example, affirmed that through his individual efforts he fought "for the victory of the United Nations and the sacred ideals of our shaken Nation." His colleague, Antonio Carolino, characterized his work as "more precious than any other, in collaborating with our effort to assist the United Nations, to defeat our enemies who have been barbarously and miserably murdering innocent women and children."[170] Similarly, Arlinda Lopes da Costa described her departed husband as "a poor soldado da borracha, who during uncertain times for our freedom, amidst the bloody swords of NAZI-FASCISM, fought fearlessly, not on the fields of Italy, against the savagery of Hitler, but instead in the dangerous Amazonian forests, facing terrible beasts and fearsome malaria, which claimed the life of my husband. . . ."[171] And in their petition to ACA President Eurico Dutra in 1946, seringueiros of the upper Jamari and Ji-Paraná regions of Guaporé asserted their right to "assistance" from the government as former soldiers in the "Battle for Rubber."[172]

Indeed, wartime politics, linking forest labor to the rights of citizenship, provided new avenues for rubber tappers to challenge oligarchic privilege. Governor Luis Silvestre Gomes Coelho of Acre, for example, received numerous complaints from seringueiros that price gouging

and short-changing had undermined "our cooperation in the current war effort."[173] And even a powerful seringalista like Alfredo Vieira Lima—a lead producer in the upper Iaco valley who had marketed 125,746 kilos of rubber in 1943—found himself challenged by Francisco Praia and João Valério, two "rubber soldiers deep in the forest in defense of the Nation." In a letter to Vargas, they alleged that Lima illegally charged migrants for transport and atabrine, and traded adulterated latex, notwithstanding that "Your Excellency has cited [it] as critical to the country's defense."[174] The duo also decried that when "we claim the rights extended by Your Excellency, he [the seringalista] insults us by saying that Your Excellency is in charge in the Palácio do Catete, and he on his seringal," and had ordered them to leave his property. Lima retorted that the two were "FAMOUS SERINGUEIROS, accustomed in their systematic way to tricking all of those whom they have worked for, from the Iaco to Acre, including my firm, and from where their disgruntlement originates."[175] Most likely, the tappers' denunciation came to naught: the government of Acre claimed to have opened an investigation, but the Banco de Crédito da Borracha, one of Lima's creditors, seemed to anticipate defeat in assessing "the challenges of communication that we struggle with in this region."[176]

In several instances, tappers even filed suits against bosses in the labor courts. In May 1943, RDC technician Paul Warner fumed that there were approximately two hundred lawyers in Cuiabá, Mato Grosso's capital, who "spend their time looking for Seringueiros who desert Seringalistas and want to square their accounts with their employer if they feel that they have money coming to them." In testimonies before the Labor Tribunal, he noted, tappers might deny that their signatures appeared on sales slips, thereby obliging bosses to come to town, hire a lawyer, and call witnesses to the sales in question. Warner also charged that the Labor Ministry failed to enforce repayment of debt by tappers who "deserted," but held bosses contractually accountable for providing tappers with 60 percent of the value of the rubber yields.[177] Warner's dismay at tappers' "desertion" was rather disingenuous. By his own admission, the heavily indebted firm of Alfonso, Junqueira & Cia. had taken to paying workers in vouchers.[178] Yet the report hints at bosses' outrage that tappers had challenged their authority through litigation and, more broadly, calls for state regulation of systems of labor and exchange in the forest. In April 1948, for example, fourteen seringalistas complained to the court in Guajará-Mirim of tappers "who seek out the Labor Court to protect their rights," while bosses were granted only twenty-four hours to comply

with judgments for payment or faced seizure of assets. Unless the court dismissed all "labor-related suits," they despaired, "the moral [stature] of the patrão that we need to enjoy vis-à-vis the employee in order to maintain our authority as boss would suffer a blow."[179]

Indeed, wartime politics had served to reshape popular understandings of the state's role in ensuring social justice, laying new foundations for workers' struggles in the Amazon, as elsewhere in the Americas.[180] Thus, in the war's aftermath, tappers initiated legal action for damages for breach of the official labor contact and the Consolidated Labor Laws of 1943. For example, Edmilson Ximenes, a native of Amazonas who arrived at the Seringal Parati in 1943, sued his boss four years later for 7,000 cruzeiros for charging a 20 percent commission on a credit advance when he began tapping, and for unjust enrichment on property improvements effected prior to his eviction. The suit was dismissed when Ximenes failed to show up on his court date.[181]

Francisco Assis de Oliveira, however, had greater success bringing suit against his boss in 1949. After tapping for two years on Manoel Moreira Lima's Seringal Bananeiras, the 22-year-old Cearense's balance exceeded 1,000 cruzeiros, but Lima, blaming Oliveira for the death of a donkey years before, retroactively debited 3,000 cruzeiros from his account. Oliveira admitted that he shot the donkey by accident—startled by something that brushed against his hammock in the middle of the night (which he thought was either a "jaguar or Indians")—and had nursed the wounded animal for two months until it disappeared. According to the lawyer for the labor court, the boss's actions were illegal because he could not prove that the tapper's gunshot had caused the animal's death; even if it had, Brazilian labor law barred employers from fining workers for damages so long as they were not caused by willful negligence. As the attorney concluded, the Consolidated Labor Laws "augment the rights and advantages of labor and circumscribe those of employers." The judge ruled on behalf of the plaintiff.[182]

Waldemar Resende Rios also sued his former boss, José Pereira da Silva, in the Guajará-Mirim court in 1948 for 5,000 cruzeiros. Rios alleged that Silva had charged for transport from town to the seringal (in violation of the employment contract), levied fines, overcharged for transport of goods, and doctored account books. Silva branded Rios a troublemaker who had picked fights, stolen from other tappers, and mutilated trees, for which he had been fined 2,000 cruzeiros. In advocating for the plaintiff, Paulo da Silva Coelho, the lawyer for the labor court, argued

that such fines violated the Forest Code of 1934, which required parties seeking indemnification for damage to private forests to file suit in civil court. And resting his case with a reference to a São Paulo court decision that scoffed at those expecting the etiquette of "the poshest salons" amid the gritty conditions of the workplace, Coelho quipped: "What would the [Labor] Tribunal of São Paulo say if it saw up-close the soldado da borracha, exposed to the constant danger of wild beasts, making his way through swamps in the middle of virgin forest, hounded by fever, malnourished, in a thankless struggle of a hard-knock life?"[183]

Such litigation was unusual, of course, in the Amazon. Most seringueiros, toiling for at least half of the year far from urban areas such as Cuiabá or Guajará-Mirim, would have been hard-pressed to seek legal redress in a courtroom. Moreover, the judicial system's emphasis on literacy, formalism, and fixity, not to mention its attendant pecuniary expenses and reputation for favoring the powerful, were sure to alienate prospective working-class complainants.[184] In fact, many migrants transported under the auspices of the Ministry of Labor were unaware of their contractual rights and stipulated earnings, noted one report to Vargas in April 1943.[185] Even if they were, social conditions soon revealed the futility of quibbling. As noted, when Raimundo Rodrigues de Sousa affirmed that no one could force him to work, the manager of the seringal killed him. When Domingos de Souza Neto, who arrived from Ceará in the Amazon in the 1940s, told his boss that he intended to lodge a complaint with the Ministry of Labor, his boss responded: "The seringueiro's minister is the lash." As Souza recounted years later, "the thing to do was to keep quiet."[186] And when Cícero Trajano de Lima left his seringal after his boss refused to pay him his balance of 3,807 cruzeiros, he came to Manaus and appealed (most likely unsuccessfully) to DNI officials to intercede on his behalf.[187] Thus, migrants in the Amazon who turned to public authorities for assistance most often sought physical refuge rather than arbitration of labor disputes—leading SAVA to lower its daily wage to discourage the return to agency camps.[188]

Yet the aforementioned legal cases also shed light on shifting political dynamics in Amazonia precipitated by the wartime expansion of state power and popular mobilization. Moreover, they conform to a broader pattern of political engagement among the rural poor during the Estado Novo that historians have only begun to uncover.[189] That some tappers could even consider the courtroom as a venue to challenge their bosses' business practices reflects another legacy of the Vargas era: new-found

understanding of their rights as workers and citizens in the forest. Amazonian landscapes had become newly politicized during the war. In this sense, the wartime transformations of the Amazon that helped to undergird mass deforestation were also harbingers of contemporary grass roots movements for social justice.

THE SOLDIERS' LONG MARCH

In the aftermath of the war, rubber tappers faced anew elite disapprobation for their purported mismanagement of forest resources. Survivors of the wartime rubber campaign likewise struggled to overcome their social marginality. The final report of the Brazilian congressional inquest of 1946 called for federal assistance to rubber tappers, subsidized return of migrants, and aid to dependents in the northeast.[190] And the First Conference on Immigration and Colonization proclaimed in 1950 that "a solution to the problem of the displaced Nordestino constitutes a veritable debt of the State to the unsuccessful ex-soldados da borracha."[191] Yet the veterans of the battle for rubber—economically disadvantaged, geographically scattered, politically isolated, and largely illiterate—confronted societal indifference and a rising tide of historical oblivion. Many migrants themselves may have viewed their wartime odyssey as a serendipitous personal journey rather than a grand nationalist epic. Brazilian postwar public policies, calibrated toward achieving political order rather than popular empowerment, focused on medical treatment and subsidized return for the neediest migrants.

The "soldados da borracha" would only obtain the right to formal compensation from the Brazilian government under the Constitution of 1988. The initiative had gathered steam during the military government (1964–85) with the efforts of the Catholic Church to defend victims of land expulsion, violence, and social exclusion in the Amazon. In 1970, Bishop Giocondo Grotti of Acre endorsed a proposal to the federal congress for government assistance to wartime tappers. Four years later, 1,744 rubber soldiers petitioned congress to obtain the same government benefits as those of Brazilian army veterans. Amazon politicians pushed for compensation as well, anticipating potential electoral payoffs: in 1982, for example, Senator Jorge Kalume of Acre proposed legislation authorizing a monthly pension for former wartime rubber workers.[192]

Under Law 7,986 of 1989, wartime rubber tappers, or their widows, earned the right to a monthly pension of twice the minimum wage in

recognition of their service to the nation. The first payments began two years later.[193] By that point, the youngest surviving veterans of the Amazonian wartime rubber campaign would have been sixty-six. Since most lacked written proof of wartime service, Brazil's social security agency ultimately allowed for testimony of two witnesses in lieu of printed documentation. As Raimundo de Oliveira recounted in "Declaration and Laments of a Soldado da Borracha":

Sofri em defesa da pátria
cumpri minha missão,
todo patriota tem
a distinta obrigação,
de servir a sua pátria
sem promover questão.

Ainda continuo pobre
Vivendo uma situação dificil
Mas espero aposentadoria
Que será um benefício
Que receberei das autoridades
Em recompensa do sacrifício.

I suffered on behalf of the fatherland
Fullfilling my mission without hesitation,
For every patriot
Has the special obligation
To serve unquestioningly
On behalf of his nation.

I am still poor
In a difficult situation.
But I await my pension
Which will be a compensation
That I receive from the authorities
In return for my sacrifice for this nation.[194]

Protagonists of the greatest conflagration of the twentieth century, the graying rubber "soldiers" joined the ranks of the Second World War's far-flung victims and forgotten homefront heroes that resurfaced around the globe demanding monetary compensation and/or official recognition for historic wrongs and unfulfilled promises. They included Holocaust

survivors, Korean "comfort women," Filipino veterans, Mexican braceros, Rosie the Riveters, and Japanese-American internees. The political reemergence of the rubber "soldiers" also coincided with the reappearance of the rainforest as an endangered biome, a historical turnaround explored in the epilogue.

IV. The Vargas Regime: Designs on "Unoccupied" Lands

Under the Estado Novo, political centralization, industrial growth, and a burgeoning professional class had placed growing claims on the Amazon. Although the Vargas regime christened the Amazon wartime campaign the "Battle for Rubber," state policies never aimed solely to maximize latex production—a battle that authorities early on recognized as unwinnable in light of the development of the synthetic industry in the United States. The lessons of rubber's gilded age had been sobering for Brazilian statesmen: commodity booms, unharnessed by state policies promoting public health, colonization, agribusiness, and modernization of transportation, made for little more than rain forest cities of faded glory. Or as Governor Aluízio Ferreira told Vargas: "the March to the West will just be a bunch of words" if federal expenditures failed to "valorize the human population and the production of wealth" in the region.[195]

For Brazilian policymakers, the Amazon represented a geographic, political, and ideological battleground that required long-term, broad-scale government measures. Thus, when Amazonian elites griped that Brazil's representatives in Washington had settled for too low a price for rubber, southern businessman Valentim Bouças, one of the negotiators, countered that "the rational planting of rubber trees, perfecting the techniques of production, medical and social assistance to the worker, sanitary defense of the region, a general transportation plan, financing of production, stimulation of the production of staple crops, [and] placement and affixing of men in their agricultural plots will assure that we never go back to the dark days that followed the bust of the rubber trade."[196] As chairman of the board of the Goodyear Tire and Rubber Company in Brazil (which, together with Firestone, consumed more than 50 percent of the nation's internal quota of 10,000 tons of raw rubber), Bouças's position conveniently obscured corporate windfalls: Brazilian tire companies paid the same fixed price as the RDC for raw rubber, but in the absence of a ceiling price on the sale of manufactured rubber goods resold to the Allies at a sizeable profit. Goodyear's and Firestone's exports from Brazil topped $100,000 in 1941, but surged to $4,559,100 between January

and May 1943 alone.[197] Nevertheless, Bouças had outlined the large-scale objectives of the March to the West, which would also reap the benefits of U.S. compliance: both American officials who favored the use of government aid for economic, strategic, and humanitarian purposes in wartime (and later Cold War) Latin America and those constrained by the imperatives of diplomatic alliance or the dictates of national sovereignty from protesting otherwise.

Brazil's wartime alliance with the United States, in fact, enabled a vast increase in public credit in the Amazon. The Banco de Crédito da Borracha, a joint venture of U.S. and Brazilian state capital, became the Banco de Crédito da Amazônia in 1950 (at which time the American directors stepped down). In 1966, the military government changed the bank's name once more to the Banco da Amazônia (BASA), which would serve as a principal regional lending institution, financing the development of cattle ranching, agribusiness, mining, and industry. The Amazon had come a long way since the turn-of-the-century boom when foreign-owned import-export houses dominated local credit markets.[198]

Wartime policies further underwrote the expansion of public health programs in the Amazon. With assistance from the U.S. Institute of Inter-American Affairs, the SESP remained a bilateral agency until 1960, and an autonomous division of Brazil's Ministry of Health during the subsequent three decades. The Instituto Evandro Chagas in Belém became a center for the study of tropical diseases and training of medical personnel. Local SESP clinics groomed scores of semiprofessional visiting nurses and sanitary guards to improve sanitation and hygiene in Amazonian towns, including insect and rodent control, food inspection, immunization, water supply, disposal of excreta, and the construction of privies. Postwar engineers trained laborers to work underwater to dig out wells in quicksand, locking a rigid slab on the base of a brick and cement wall casing, to filter sufficient quantities of water for fair-sized communities; the invention, which became known as the "Amazon well," was widely adopted in the region and throughout the world.[199] Moreover, postwar application of DDT, combined with the introduction of the synthetic drug chloroquine, cut the incidence of malaria in Brazil by 1970 to 1 percent of its rate two decades earlier, although 70 percent of these cases occurred in the Amazon. Amidst the broader failure of global eradication efforts, however, malaria rebounded in the Amazon in the 1970s due to deforestation, mass migration, and the emergence of chloroquine-resistant plasmodium. By 1986, over 500,000 cases of malaria were reg-

istered in the Amazon, accounting for nearly 99 percent of the disease's victims nationwide.[200]

As historian André Luiz Vieira de Campos points out, SESP's professional training, network of clinics and dispensaries, and sanitation works in the Amazon provided a postwar model for public health programs in Brazil's less economically developed regions. Furthermore, the dissemination of public health practices, a quotidian ritualization of the fundamentals of citizenship, also strengthened identification of backlands populations with the nation-state.[201] Although the human development index in northern Brazil continues to lag behind the southern states, public health and sanitation in the Amazon witnessed advances over the postwar period.

Vargas-era officials also proved rather adept in channeling U.S.-subsidized labor and technology transfers from rubber production to promote long-term settlement of the Amazon. Mass relocation of unaccompanied men had never pleased officials from the National Department of Immigration (DNI) or the Catholic Church, which favored the resettlement of families in the Amazon. After SEMTA fell far short of its contractual obligation to transport 50,000 male workers to Belém by mid-1943, the U.S. government signed a subsequent agreement with its successor, CAETA, to subsidize the transfer of 16,000 male workers to the Amazon between October 1943 and May 1944 at a cost of $2.4 million.[202] Under a February 1944 agreement between CAETA and the DNI, however, family recruitment and reunification regained priority; thereafter, Brazilian officials made no distinction in their tallies between single (or unaccompanied) men and men accompanied by their families. Thus, by November 1944, CAETA had transported 11,180 workers, as well as 5,955 dependents, although the latter were not covered by the original agreement with Rubber Development.[203] While U.S. officials contemplated the suspension of funds to CAETA for breach of contract, RDC president Douglas Allen noted that "in order to avoid diplomatic complications involved in an agency of the United States government checking up on an agency of the Brazilian Government," the most that could be done was to alert its authorities to "a situation which appears to threaten non-performance by Brazil of its obligations"[204] (see figure 5.7).

Similarly, the Fundação Brasil Central (FBC), a federal agency established in 1943, undertook to develop the central-west and Amazonian regions through the construction of airfields and the implantation of agricultural colonies and large-scale cattle ranches interlinked to newly

Figure 5.7 Women and children at DNI migrant barracks at Manaus. *Source*: National Archives.

planned towns. Through the proposed building of roads linking São Paulo to Cuiabá and Santarém, the FBC aimed to "enrich the nation with the effective increase of its territory and create new centers of consumption and sources of wealth."[205] The FBC acquired trucks, medical supplies, radio paraphernalia, office equipment, machinery, and personnel from SEMTA after the labor recruitment agency was disbanded, as well as hydroplanes, radio stations, motors, fuel, tapper supplies, and fixed installations liquidated by the U.S. government.[206] Indeed, wrangling over the fate of the Manaus airfield, constructed by the RDC for the rubber campaign, exemplifies Brazilian maneuvers to advance long-term regional programs and infrastructural expansion. Upon the RDC's withdrawal from the Amazon, Brazilian authorities protested the agency's unwillingness to extend and repave the airfield, which they eyed as a facility to expand aviation in the hinterland. The RDC ultimately agreed to hand over complete radio and meteorological systems, and to extend the tenure of the relevant U.S. technicians in the Amazon to train Brazilian personnel to prevent interruption in service. (The decision also honored a request of the Weather Bureau in the United States whose functionaries had been involved in weather reporting for the area.[207]) By 1950, General Borges Fortes de Oliveira could report on various aeronautical studies

that the FBC and the Ministry of Aeronautics had conducted between the Xingu and Tapajós rivers, including aerial photos taken by the U.S. Air Force in the Amazon, to select new locations for airstrips on the route linking Rio de Janeiro to Manaus.[208]

For Brazilian policymakers, the Amazon's wartime history would vindicate the importance of public planning, state subsidies, infrastructural expansion, and scientific method to transform the region. What had wartime disruptions in coastal trade and shortage of goods shown, charged João Alberto Lins de Barros, if not Brazil's folly in failing to develop riverine and overland routes to serve the hinterland?[209] What use were the wartime migrant way stations, noted engineer Dulphe Machado of the Immigration and Colonization Council, but as laboratories where government planners could "institute a veritable social policy, gathering magnificent data for a future study of internal migrations, correcting abuses and flaws with the lessons that have been learned."[210] What more could the rubber campaign offer, asked the Conselho Nacional de Geografia, but the potential to learn from the "sizeable migration of Brazilians, above all nordestinos, to Amazonia," for future social science studies.[211] And what had World War II confirmed, insisted Benjamin Hunnicutt in 1945 in *Brazil Looks Forward*, other than that: "In the modern days of the 'Have and Have-Not' theory, so much unoccupied land constituted a real danger in international relations. Some nations of the world are so densely populated that it is difficult to maintain production and commerce sufficient to supply a living for all their inhabitants. . . . Brazil became aware of its peril and has prepared for her own defense by adopting military measures along with important plans for an effective occupation of her surplus lands under lawful and legitimate means of protection."[212]

In 1946, Brazil's newly drafted Constitution earmarked a minimum of 3 percent of federal revenues for the "economic valorization of Amazonia." The Superintendência do Plano de Valorização Econômica da Amazônia (SPVEA), created in 1953, administered the constitutionally mandated federal revenues for the Amazon, subsidizing and coordinating regional development programs. It was succeeded in 1966 under military rule by the Superintendência de Desenvolvimento da Amazônia (SUDAM).

In fundamental ways, the Vargas regime laid the groundwork for the military government's public policies in the Amazon. Following the coup of 1964, the generals contracted vast loans from multilateral develop-

ment banks to construct highways linking the Amazon to São Paulo's industrial economy and northeastern labor reserves, and to undercut traditional riverine trade. Through billions of dollars in subsidies and tax breaks, the military lured corporate investors to the Amazon. And through the distribution of public land, the regime encouraged mass migration and frontier settlement. During the 1940s, the Brazilian state's capacity to remake the Amazon was necessarily fainter given the strain on global capital markets, the contentiousness of developmental aid to Latin America, the concentration of Brazilian domestic manufactures in consumer rather than capital goods, and the limits of technology. Yet the Vargas regime seized on geopolitical turnabouts to leverage foreign capital and technology transfers, establishing the infrastructural and ideological foundations for subsequent state projects in the Amazon.

Although for U.S. officials the Amazon had only fleeting importance for the war, for Brazilian policymakers the war had a lasting significance for the Amazon. The varied meanings and mediations of Amazonian nature explain, in part, such divergences.

War is more than the global backdrop for this history of the Amazon; it also serves as an apt metaphor for the multifaceted and uneven battle for power in and over the region. Although patriotic pronouncements exhorted the peoples of the Americas to transcend boundaries of class and nation to win the war, the Amazon's vast territorial expanse, abundant natural resources, varied geographies, and charged ideological significance could not ensure any such unanimity. Common professional background or technocratic mindset may have united select Brazilian and U.S. policymakers, but national interest and cultural bias often cleaved them. Bosses and tappers jousted over resources in the forest, while migrants ranged over varied geographies in the pursuit of livelihoods.

In search of latex, U.S. officials subsidized the Amazon rubber trade and orchestrated an extensive publicity blitz to boost production. Dismayed by Amazonian opposition or indifference, a number of U.S. wartime observers faulted the region's disadvantaged position in the global rubber trade (particularly in light of the development of the U.S. synthetic industry). Yet the primary explanation in bureaucratic, journalistic, and historiographical circles focused on northern do-gooders waylaid in the forest. It is "difficult to understand this attitude in a class of people such as the average seringalista, and it is even more difficult to

understand just how it is allowed to continue during the greatest war in history," wrote RDC technician William MacKinnon of bosses' reluctance "to meet our war needs."[213] Colonialist outrage at the perceived misuse of natural resources is nothing new in the histories of the tropics, nor are the limits of moralizing discourse to modify locals' behavior.

Bosses' wartime "attitude," in fact, reflected their intimate understanding of the nature of the Amazon. Veterans of boom and bust cycles, Amazonian bosses eyed the likelihood of a long-term resurgence of the wild rubber trade on the international market, or at home, with skepticism. They bristled at suggestions to hire untested male laborers, increase rubber yields, or refrain from charging workers for putatively legitimate business expenses.[214] Bosses also comprehended the forest's power to mesmerize state planners, attract capital, and entomb social protest. Ultimately, they stood up to U.S. and Brazilian officials: the former required their collaboration in the rubber program, while the latter lacked the capacity or the will to enforce price controls and labor legislation in the forest. Bereft of state assistance in the rural Amazon, migrants and tappers pursued time-tested patterns of land and resource management, market insertion, social kinship, and geographic mobility. Local knowledge and forms of natural resource use persisted, defying the dictates of markets and states.

Leveraging the Amazon's strategic wartime importance, the Vargas regime extracted economic and technical assistance from the U.S. government to advance long-term development goals. Brazil's professional classes, military officials, and regional oligarchs had championed colonization, sanitation reform, modernization of transport, and market expansion in the Amazon prior to Pearl Harbor. Upon U.S. entry into the region, Brazilian authorities knew quite well how to resist, or more accurately make the most of, the "internationalization" of the Amazon at its historical apex.

The wartime history of the Amazon illustrates how competing uses and meanings of nature have shaped landscapes and pathways in the region. The struggles waged by an array of wartime mediators served to define the realms of nature and politics in the Amazon, much as would those of their postwar successors, in both historically patterned and unforeseeable ways.

EPILOGUE

FROM WARTIME SOLDIERS TO GREEN GUERRILLAS

Under the guise of development, more than 10 percent of the Brazilian Amazon was deforested in the half century following the war.[1] But something else overtook the region as well in recent decades. The Brazilian government demarcated approximately 22 percent of its Amazonian territory as indigenous lands, and another 10 percent as conservation units, including extractive reserves for rubber tappers and other "traditional peoples."[2] Rubber tappers, onetime "soldiers" in the Allied war effort, came to be hailed as "green guerrillas," protectors of biodiversity and the global environment.[3] And the Amazon, once routinely referred to as a valley, basin, or jungle, became popularly acclaimed as a rainforest.[4]

One might assert that there is nothing unprecedented about the current fashioning of the Amazon. Since the colonial period, Amazonian populations have been producers and consumers of global commodities, targets of interventionist and assimilationist policies, and objects of interimperial rivalries. Export of primary products continues to mark the region's fitful integration into the world economy. Moreover, as a morality tale pitting nature against culture and laden with heavy racial overtones, the Amazon has long accommodated outsiders' presentiments of apocalypse or salvation.[5] The Amazon's nationalistic significance for Brazilians also runs deep, even if its articulation heretofore lacked the jingoistic pithiness of the more contemporary slogan, "The Amazon is ours."

Yet the scale of things is now quite distinct. While the jungle has always made for a sensational tale and sale, the commodification of the Amazon in the food, vitamin, entertainment, and tourist industries reached new dimensions in mass-consumer societies of the late twentieth century. While foreign consumers may have coveted Amazonian rubber, and foresters and scientists scrutinized its flora and fauna, this is a far cry from the mass panic regarding tropical deforestation. And if conflicts over resources, representation, and power are no novelty in Amazonian history, the "greening" of its social movements, reworking local vocabularies of class struggle as well as mythical or spiritual perceptions of nature into new political identities, is.[6]

In this epilogue I examine how the Brazilian Amazon came to be reframed in (inter)national affairs and the popular imaginary in the latter part of the twentieth century, taking as my endpoint the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. I explore how transformations in the Amazon during Brazilian military rule (1964–85) and its aftermath collided with the popularization of the environmental movement in the Northern and Southern Hemispheres, relegating public policies and local conflicts in the region to new (as well as well-trodden) transnational fields. Although these tensions in many ways embody the so-called north-south divide in environmental politics between conservationism and national development, a strict dichotomy is belied by the World Bank's financing of government projects that have accelerated tropical deforestation, and by the advocacy of Brazilian NGOs and grassroots movements for environmental conservation.[7] Nor does this putative Green Curtain tell us much about the historical processes and contexts that engendered such geopolitical positions. I examine, therefore, the novel scientific disciplines, technologies, and cultural vocabularies that served to remake the Amazon in the popular and political imaginary in the North Atlantic and in Brazil. I argue that the contemporary fracas bespeaks as well the region's ongoing entanglement in civilizing processes and modernist angst, as well as in longstanding local struggles for power.

The Amazon and the Other Green Revolution

Like the Vargas regime, Brazil's military government chafed at the unfortified borders, sparse population, and tenuous state control in the Amazon.[8] Challenged in "developing" the Amazon, the military dictatorship too wooed foreign capital for megaprojects and resource extrac-

tion, particularly hydroelectric dams and mineral exploration. And the military likewise cast the giant region as an outsize nationalist agenda: a panacea for underdevelopment and social injustice, a marker of Brazilian character and good government, a priority for national security. But the concomitant emergence of a mass environmental movement in the North Atlantic and Brazil, and the grassroots mobilization of forest dwellers, tugged Amazonia in different directions.

The Brazilian military's policies in the Amazon have been extensively explored.[9] The state invested billions of dollars in transportation infrastructure, telecommunications, and public utilities, and lured private capital through tax shelters and exemptions and liberal credit policies. Between 1971 and 1987, for example, cattle ranches, owned principally by Brazilian investors and multinational corporations, received an estimated $5 billion in subsidies.[10] The Amazon's population also grew by almost ten million between 1960 and 1980, with migrants from southern and northeastern Brazil acquiring thousands of plots through government-sponsored and private colonization projects.[11] With real estate values soaring and land titling marked by carelessness and corruption, the rural poor suffered fraud, violence, and eviction. By 1986, 64 percent of all land conflicts in Brazil occurred in the Amazon region.[12]

What most aroused international attention to the Brazilian Amazon during military rule and its aftermath, however, was deforestation. The causes of deforestation include highway construction (85 percent of all deforestation occurs within thirty miles of a road); land use for pasture (as of 1989, livestock occupied more than 85 percent of the area cleared); hydroelectric projects and construction of dams; colonization, mining, and logging; and, more recently, soybean production.[13] Whereas in 1975 less than seven million acres of land in the Brazilian Amazon had been altered from its original forest cover, by 1988 an estimated forty million acres of forest had been destroyed.[14] Using Landsat data and satellite information from the U.S. National Oceanic and Atmospheric Administration, research scientist Philip Fearnside of the Instituto Nacional de Pesquisas da Amazônia estimated total deforestation through 1988 at 8 percent; a World Bank–commissioned study arrived at a higher figure of 12 percent.[15]

Foreign concern with tropical forest depletion, of course, has a long history. In the seventeenth century, for example, the Portuguese Crown protected from felling various Brazilian timbers deemed critical for shipbuilding.[16] Eighteenth-century British officials, alarmed by the perceived

climatological consequences of forest depletion in their tropical island colonies, reserved tracts of forest land.[17] Yet as political scientists Margaret Keck and Kathryn Sikkink point out, the term "tropical deforestation" gained widespread use among environmentalists only in the early 1970s; before that, concern with tropical forest loss fell under the rubric of habitat protection. The Swiss-based International Union for the Conservation of Nature and Natural Resources first took up the issue of tropical deforestation in 1972 in response to the Brazilian military's colonization projects in the Amazon.[18] More broadly, we might argue, the proliferation of a global mass environmental movement reframed struggles over power and resources in the Brazilian Amazon in new transnational terms.[19]

In the Northern Hemisphere, the origins of a popular "age of ecology" have been traced to the publication of Rachel Carson's *Silent Spring* (1962), which detailed the toxic effects of pesticides on the environment and the fundamental interdependence of humans with other biological species; to the 1960s "flower power's" repudiation of consumerism and militarization; and to the horror of Hiroshima. But the decade of the 1970s, the backdrop for the Brazilian military government's foray into the Amazon, represented a watershed in the popularization and global diffusion of environmentalism. Inaugurated with the launching of Earth Day, the 1970s saw the creation of the Environmental Protection Agency (1970) and subsequent passage of key environmental legislation in the United States; the establishment of UNESCO's Man and the Biosphere Programme (1971), the UN Environment Programme (1972), and the UN Conference on the Human Environment in Stockholm (1972); and the founding of the Green Party in Australia, New Zealand, and Switzerland (1972), in Great Britain (1973), and, most importantly, in West Germany (1979). The decade also was marked by the publication of influential books focused on problems of species depletion, catastrophic climate change, and human depredation of the environment, including the neo-Malthusian *The Limits to Growth* (1972), commissioned by the Club of Rome. Environmental history emerged as a subdiscipline in the 1970s in North American universities, while the term "environment," with its social scientific connotation, came to replace the more romantic-sounding "nature," and *eco-* attached as a prefix signaled this new-found consciousness.[20]

The allure of nature stretched far back in Western thought: deep-rooted religious, philosophical, and artistic traditions have viewed "wilderness" as a fount of divine revelation, a shelter from political tyranny, a refuge

from industrial consumerism, a consolation for mortality.[21] But the embrace of environmentalism by vast sectors of the middle class since the 1970s was novel, reflecting, in part, socioeconomic changes in advanced industrial nations. In the United States, as the number of educated people expanded in the postwar economy and filled the public sector, the arts, and the service industries, a larger proportion of the population of working age became disengaged from processes of industrial production. Moreover, the boom in most economies of the North Atlantic in the 1980s meant that fewer objected to environmental protection based on financial concerns.[22] For the American Left, disillusioned by Vietnam and Watergate and demoralized by the Soviet model of socialism, ecological movements sustained the subversive ethic of Marxism in their cross-cultural, transnational critique of bourgeois materialism and individualism.[23] And the increase in automobile ownership, while worsening pollution, also broadened urbanites' access to wilderness areas.[24] Others point out that environmental degradation, which had long victimized poor people and people of color, only became a white, middle-class political concern in the 1970s when the growth of private transport purportedly democratized issues such as pollution.[25] Over the course of the 1980s, environmental organizations in the United States mushroomed with the development of computerized databases allowing for direct mail techniques and management of membership lists. Between 1985 and 1990, membership in the Environmental Defense Fund, the Natural Resources Defense Council, Greenpeace, and the Nature Conservancy doubled, while World Wildlife Fund-U.S. quintupled. Transnational environmental networks increased from two groups in 1953 to ninety in 1993, or from 1.8 percent of total international NGOs to 14.3 percent.[26]

In Brazil, the confluence of various factors led to the growth of environmental politics in the 1980s: the rapid increase in urban pollution and environmental degradation that sensitized sectors of the middle class; the political reintegration of the Left following defeat of the guerrilla movements and the democratic opening by the military in the early 1980s; the emergence of new social movements and public debate; and Brazil's role as a developing nation with strong ties to the international market and media amidst the worldwide proliferation of the ecological movement.[27] The 1980s also witnessed the spread of environmental NGOs in Brazil, many of which received funding from North American and European embassies and philanthropic organizations, and served as critical links in gathering and disseminating information and devel-

oping a network of individuals and organizations concerned with Amazonia.[28] In the Amazon, a significant conservation unit system already existed by the mid-1980s, largely due to the dogged lobbying efforts of a small group of Brazilian scientists and conservationists who had convinced the generals of the potential importance of the region's resources for the biotechnology and pharmaceutical industries as well as national patrimony.[29]

Moreover, Brazil's political elite, facing massive foreign debt, hyperinflation, and neoliberal restructuring following the return to democracy, became increasingly sensitive to foreign censure and incentives toward environmental policymaking in the Amazon. At the G7 Summit in Houston in 1990, for example, the Pilot Program to Conserve the Brazilian Rainforest was launched largely at the initiative of the German government. The program consisted of a $300-million aid package administered through the World Bank (as trustee) and the Brazilian Ministry of the Environment, designed to support conservation and sustainable development in the Amazon and the Atlantic rain forest, while strengthening institutional capacity and environmental policymaking in Brazil.[30] In hosting the U.N. Conference on Environment and Development in Rio de Janeiro (Earth Summit) in 1992, President Fernando Collor aimed to showcase Brazil's commitment to environmental protection.

If environmentalism had reconceptualized the Earth as a set of interlaced ecosystems, we might still speculate how saving the Amazon rain forest came to be one of its dearest shibboleths, a cause célèbre of over 200 NGOs worldwide.[31] As the Environmental Defense Fund affirmed in 1989:

> Deforestation of the Amazon is one of the major environmental crises in the world today. The Brazilian Amazon contains about a third of the Earth's remaining tropical forest and a very high portion of its biological diversity. One hectare (2.47 acres) of Amazonian moist forest contains more plant species than all of Europe. Two thousand Amazon fish species have been identified—ten times more than in Europe—and there may be another thousand species still to be discovered. . . . Cutting and burning, the usual way of clearing forest, disrupts not only the local climate; it also affects the global climate by emitting "greenhouse gases" that trap heat in the atmosphere. Recent satellite evidence shows that an area nearly the size of Kansas was burned in 1987 alone.[32]

Grounding scientific claims in quantitative data, environmentalists have championed the protection of the Amazon, the world's largest remaining tropical forest, as a bulwark against species depletion and global warming. But does concern with the Amazon in the Northern Hemisphere not also build upon an old tendency of its residents to view tropical landscapes as wilder, purer, and demographically emptier than their temperate counterparts?[33] Is the very denomination of "deforestation" as shorthand for the multifaceted socioenvironmental changes in the Amazon that have been prompted by massive land enclosures revealing of Western hallowing of trees—whose size, "prehistoric" origins, and self-regenerating energy embody the dignity and transcendence that the romantic tradition cherishes in nature? Or the affirmation of life in death-denying, industrial cultures?[34] Is it, as Bruno Latour argues, that political ecology claims to speak on behalf of "the Whole" but can succeed in shaping public opinion and altering power relations only by "focusing on places, biotypes, situations, or particular events"?[35] Does Americans' overriding focus on tropical deforestation in the Amazon, rather than corresponding processes in Sumatra, Borneo, Congo, and West Africa, reflect a penchant for policing the nation's "backyard" in Latin America?[36] Or perhaps in media-driven, information-saturated societies, the burning of the rain forest has made for a riveting news report—such as the five-part documentary series on Amazon deforestation, "The Decade of Destruction," aired on Public Broadcasting System's *Frontline* in 1990. Fire, with its infernal associations, notes Brazilian environmental scientist Alberto Setzer, "has a strange effect on people's minds. It attracts their attention."[37] Not to mention that affixing a Save the Rain Forest sticker to a car bumper as a badge of ecological consciousness represents far less an inconvenience than opting for public transportation. Environmentalists, policymakers, the media, and consumers had not invented deforestation, but their representations of the forest forged new meanings and political battlegrounds for the Amazon.

Science and the Postwar Remaking of the Amazon

Transformations in the Amazon also reflect the conflicting impact of science and technology in imparting value and meaning to tropical rain forest. While the electrical and metallurgical industries have placed new demands on forest resources through the construction of hydroelectric dams and consumption of vegetable charcoal, the fields of conservation

biology and genetic engineering have advanced nature preservation.[38] And if the Brazilian military government's aerial radar survey Projeto Radam of the 1970s benefited mining companies in the Amazon, it also provided information on the region's geology and soils and recommendations for the creation of conservation units; the more comprehensive and detailed data collected through the Landsat remote-sensing satellite program has enabled monitoring of deforestation.[39] More broadly, we might argue, science has redefined the nature of the Amazon through new kinds of knowledge claims. Notably, systems ecologist Howard Odum obtained significant understanding of the structures and functions of tropical forests in the 1960s by conducting radiation tests on Puerto Rican forests as part of the U.S. Atomic Energy Commission's investigations into the effects of a potential nuclear war or accident on forests. Odum's coedited volume, *A Tropical Rain Forest* (1970), offered the first comprehensive analysis of tropical forest ecosystems—underscoring the ways in which nutrients are derived and exchanged from the forest and its litter, and held in the tissues of living organisms rather than in its shoddy soils—and heralded the emergence of a new professional cadre of tropical ecologists and ecological engineers.[40]

Conservation biology further served to reframe (and rename) the significance of land use change in the Amazon. Conservation biologists, whose scientific discipline was formalized in the 1980s to preserve ecosystems and habitats rather than mere species, coined the term biodiversity.[41] As David Takacs notes, the defense of biodiversity was less tainted with class or geopolitical privilege than "wilderness protection," dissociated from the negative connotations of "nature," uncompromised by the triage of the older endangered species approach, and conceptually linked to multiculturalism (another term popularized in the 1980s). It retained scientists' goals of preserving intact ecosystems and biotic processes, while allowing the public to maintain emotional ties to evocative icons. Biodiversity did not appear as a keyword in *Biological Abstracts* in 1988, but was listed seventy-two times in 1993.[42] In 1992, the Convention on Biological Diversity was signed by 150 government leaders at the Earth Summit in Rio de Janeiro.

Climate science likewise came to reframe the Amazon in the transnational arena by implicating deforestation in the process of global warming. The discovery of the greenhouse effect was the product of a circuitous scientific and political journey. During the Cold War, the U.S. government increased research funding for physical geoscience and meteorology in

the interest of national defense, the potential waging of climatological warfare, and global rivalry with the Soviet Union for scientific preeminence. In the 1960s, the U.S. Department of Defense began to use satellites to monitor global weather; radiocarbon, which came under intense study in the U.S. amidst wartime efforts to build nuclear weapons and in postwar detection of radioactive fallout from Soviet nuclear tests, could be used to track the movement of carbon in the atmosphere. Collaborative international scientific research was also upheld by U.S. policymakers as intrinsic to free trade and global stability. The U.N. World Meteorological Organization, created in 1951, promoted international cooperation in meteorological observations and related services, while the International Geophysical Year (1957–58) drew together scientists from numerous nations and disciplines to collect global geophysical data with possible military and civilian applications. In 1958, scientist Charles David Keeling was the first to measure carbon dioxide levels in the atmosphere. Although funded research on the effects of long-term climate change remained sparse well into the 1970s, a number of scientists began to warn that the heating of the atmosphere caused by the emission of carbon dioxide and other greenhouse gases might precipitate melting of polar ice, rise in water levels and inundation of productive lands, changes in the ozone layer, and increases in ultraviolet light radiation.[43]

With the 1980s marked by the six hottest years then on record, talk of global warming migrated from arcane scientific journals to political forums, media reports, and everyday conversation. Anticorporate groups latched on to the cause as a bane of government deregulation. The environmental movement took up global warming as a key plank, as groups that had other objectives—such as preserving tropical forest, reducing air pollution, removing fossil fuel subsidies and promoting renewable energy sources, or slowing population growth—could now find common cause. Most notably perhaps, as climates came to be reconceived in terms of planetary systems rather than regional weather patterns, people and politicians became informed about the problem of global warming—even if many remained perplexed by its ramifications and unmoved by calls for lifestyle overhauls.[44]

Land use change in the Amazon has been implicated in the greenhouse effect through burning and decomposition of biomass, the repeated burning of pasture and secondary forest, as well as through logging, cattle, and hydroelectric dams.[45] In 1991, the World Bank estimated that deforestation in the Brazilian Amazon accounted for 4 percent of

total carbon dioxide emissions, while the contribution of deforestation worldwide to global warming (primarily from the release of carbon) was estimated at 14 percent in 1990. As a percentage of carbon dioxide emissions from fossil fuel burnings, deforestation worldwide accounted for 27 percent in 1989–90, while the Brazilian Amazon, according to the Brazilian government, represented between 4.4 and 7.6 percent.[46] (During the 1980s, advanced industrialized countries—with 26 percent of the world's population—accounted for 81 percent of energy consumption, while the United States ranked as the world's single largest emitter of greenhouse gases in 1990.[47]) By the late 1980s and early 1990s, politicians and citizens in the Northern Hemisphere increasingly linked tropical deforestation to the problem of global warming. In 1989, for example, the German parliament held hearings on tropical deforestation and climate change, while reports published by Greenpeace and Friends of the Earth-UK over the next two years affirmed that one of the most cost-effective mechanisms to counter the greenhouse effect was through slowing deforestation and encouraging tropical reforestation.[48]

"Traditional Peoples of the Forest": New Identities and Forms of Representation

The greening of Amazonian politics also coalesced from the mobilization of rubber tappers, who employed conservationist discourse to confront endemic violence and marginalization, as well as new-found opportunities for strategic alliance. During the 1970s and 1980s, as land enclosures intensified in the Amazon, thousands of rubber tappers suffered expulsion; in 1980 some 68,000 families or 340,000 people depended on latex extraction for their livelihood.[49] Since Brazilian law permitted squatters to obtain possession if they consistently utilized land for more than a year without conflicting claims from other parties, tappers brought a number of successful legal suits demanding title or indemnification for property, or mobilized for land allotments on state-sponsored colonization projects.[50] In the state of Acre, tappers also resorted to direct action in the form of the *empate*, or standoff, in which they physically impeded ranch workers from clearing forest for pastureland. Between 1975 and 1988, 45 empates took place, of which one third were successful.[51] The repression that ensued was also staggering: 400 arrests, 40 cases of torture, and several assassinations.[52]

Upon the promulgation of the National Plan of Agrarian Reform in 1985, which envisioned the settlement of 1.4 million families over a

period of five years, tappers mobilized to ensure that regional plans for the Amazon would accommodate the specific needs of extractivists. At the inaugural meeting of the National Council of Rubber Tappers (Conselho Nacional de Seringueiros-CNS) in Brasília in 1985—attended by over 100 tappers from a variety of unions and organizations (including former rubber "soldiers") as well as representatives of Brazilian, U.S., and British nongovernmental organizations—participants endorsed the suspension of state-sponsored colonization projects in rubber areas; the involvement of extractors in all regional development plans; and the preservation of forest areas through the creation of extractive reserves on federal lands. In an effort "to establish the broadest possible alliances with traditional peoples in Amazonia," the CNS subsequently joined forces with the Union of Indigenous Peoples to form the Amazonian Alliance of the Peoples of the Forest, endorsing "models of development that respect the way of life, cultures and traditions of forest peoples without destroying nature, and that improve the quality of life."[53]

Many tappers traditionally believed that the forest was inhabited by "encantados," or enchanted beings, including "mothers and fathers" responsible for its flora and fauna. The Mother of Wild Animals (*"mãe da caça"* or *"Caipora"*) demanded respect or even abstention from hunters of game, and punished violators of hunting and food taboos with *panema*, an incapacity to hunt caused by the failure to spot animals in the forest. The Mother of the Rubber Tree *("mãe da seringueira")* rewarded young, unmarried men with productivity in return for fair treatment, and was believed by some to show scars on her face and even experience pain from abuse.[54] Yet tappers' self-denomination as "traditional peoples of the forest" marked a noteworthy linguistic turn. Seringalistas referred to tappers as "customers" in light of the commercial exchanges that underpinned social relations, while rivers stood in as their standard locational references; racial phenotype, geographic origin, and length of stay in the Amazon were also common identity markers. Tappers most likely had not viewed themselves as "traditional" (or as allies of indigenous peoples for that matter), given that their ballads celebrate their distinctive contributions to the modern era: "let's honor the tapper / let's honor the nation / cause thanks to the work of these people / we have automobiles and aviation."[55] While anthropologists have debated whether "traditional peoples" instinctively practice conservationism or whether this notion is a myth cultivated by environmentalists in industrial society, I am interested in examining the evolution of political iden-

tities and cultural representations in the Amazon in tandem with new forms of mediation.[56]

Rendered invisible by postwar developmentalist agendas and ethnographic studies, tappers faced a challenge of political legitimacy.[57] Geopolitical thinkers and corporate investors portrayed vast, unoccupied spaces in the Amazon, while the miscegenated populations of the Amazon, products of a long history of colonial rule, religious conversion, sexual violence, and migration, destabilized narratives of unspoiled landscapes dear to romantics.[58] Former rubber "soldiers" did stress their wartime service to garner government support, but they were a smaller and older subset of tappers with distinct historical claims and grievances. By embracing a new political identity as "traditional people," whose environmentalist calling to protect the forest validated their own longstanding beliefs and practices, tappers could stake their claims to legal rights and social inclusion. With backing from international environmental NGOs and Brazilian anthropologists, rubber tappers would gain newfound leverage in conflicts over resources and power in the forest.[59]

In the early 1980s, U.S. and British environmental organizations mobilized against ecologically destructive projects funded by multilateral banks, which were vulnerable to U.S. congressional pressure due to greater American financial contributions and voting shares. Between 1983 and 1986, the U.S. Congress held seventeen hearings related to multilateral development banks and the environment. One of the most contentious cases was the World Bank–funded Polonoroeste development project in Rondônia, whose ecological impacts were denounced by the Environmental Defense Fund.[60] In opposing Polonoroeste, environmentalists established ties with Chico Mendes, the founder of the Xapuri rural workers union (and son of a northeastern migrant), who had organized rubber tappers in Acre against evictions for over a decade. In meetings with officials of the U.S. Congress, the World Bank, and the Inter-American Development Bank, Mendes lobbied against Polonoroeste's proposed paving of a highway linking the capitals of Rondônia and Acre. The alliance between rubber tappers and environmentalists was mutually beneficial: the former gained international supporters in their struggle for social and environmental justice, while the latter could showcase alternatives to large-scale development projects and deflect charges that deforestation only concerned privileged foreigners.[61] The campaign succeeded in pressuring the World Bank to suspend more than half of its disbursements for Polonoroeste—the first time ever that

Figure Epil.1 The house of Chico Mendes, and site of his murder in 1988, in Xapuri, Acre. *Source*: Photograph by author.

the institution halted a loan for environmental concerns.[62] Mendes received a United Nations Environment Programme Global 500 Roll of Honor Award in 1987.

Grass roots mobilization in the Amazon sparked both violent reprisals and political concessions. In December 1988, a rancher assassinated Mendes—one of ninety rural workers killed in Brazil that year (see fig. Epil.1). The following year, however, an amendment to Brazil's National Environmental Policy Act formally established extractive reserves as a distinct type of conservation unit that allows for the extraction of natu-

ral resources by residents. The World Bank too endorsed the reserves to "permit the simultaneous conservation and economic development of large tracts of primary forests in the Amazon region," and to rehabilitate the institution's tarnished image.[63] In 1992, the U.N. Convention on Biological Diversity recognized the dependence of indigenous and local communities on biological resources, and the need to ensure the equitable sharing of the benefits derived from the use of traditional knowledge and practices relating to the conservation and sustainable use of biodiversity.[64]

As of 1994, the total area of Brazil's extractive reserves (eight of which were in the Amazon) encompassed 22,007 square kilometers, with a total population of 28,460.[65] Unlike Brazil's indigenous populations, whose constitutional rights to land derive from their status as original occupants, land rights of "traditional peoples" on extractive reserves are contingent upon environmental stewardship.[66] On the federal conservation units, community associations receive a contract for exclusive land use, and may grant free concessions for sixty years to individual members resident in the area for at least one year.[67]

Through expertise, perseverance, and adaptability, rubber tappers have mediated distinctive meanings and uses of forest resources. Alliances with Brazilian and international NGOs afforded tappers landmark political and territorial gains. Yet the removal of federal subsidies for rubber in the 1990s and lack of adequate education and health care on the extractive reserves have strained livelihoods and led to out-migration.[68] Indeed, rubber tappers' ongoing struggles over resources and representations illustrate what Roger Chartier has deemed the fundamental object of history: "tension between the inventive capacities of individuals or communities and the constraints, norms, and conventions that limit—more or less forcibly according to their position in the relations of domination—what is possible for them to think, to express, to do."[69]

Amidst aggressive postwar frontier expansion, the rebirth of the Brazilian Amazon as global ecological sanctum was midwifed by political realignments, scientific and technological advances, and newly minted cultural vocabularies and values. Amazonian resources and populations have been age-old contributors to global development and scientific knowledge, as well as icons of Brazilian nationalism, but shifting material demands and symbolic meanings served to reinvent the rain forest

in (inter)national politics. Forest dwellers had long flouted the regimens of bosses and bureaucrats but can now claim access to natural resources, and alternative futures, as "traditional peoples." Raging from Manaus to Manhattan, contemporary conflicts over political ecology in the Amazon involve activists and extractivists, biologists and bloggers, agribusiness and academics, journalists and journeyers, consumers and conservationists, and forests and freeways.

Yet the Brazilian Amazon's current linkages to the global economy and imaginary evince well-worn historical patterns. Much as the crisis in industrial capitalism after Pearl Harbor precipitated U.S. intervention in the Amazon, its excesses stoke current concerns with tropical deforestation and global warming. Observers in the Northern Hemisphere continue to claim the scientific know-how and moral quotient to determine proper management of tropical forests. Malthusian panics that have threaded colonial and environmental policymaking echo in charges that tropical deforestation jeopardizes the Earth's future. Or the danger is said to lurk in "Third World kleptocrats," who have purportedly concocted global warming to extort money from "the West."[70] Alternatively, visions of Amazonian bounty that uphold tropical forest carbon sinks as antidotes to global warming can deflect political pressure on the energy and automobile industries in the United States to invest in environmentally friendly technologies.[71]

Present-day struggles over resource management in the Amazon also echo longstanding trends. Where seringalistas once bragged of "conquering" the forest, leaders in agribusiness, mining, and industry in the Amazon now trumpet their methods of land use change as models for development. Like Vargas-era foes of social welfare legislation, agrarian elites in the Amazon tar conservationism as an infringement on business prerogative or national sovereignty, and use intimidation and violence to silence opponents. Natural resource extraction continues to lure private capital, state investment, and multilateral loans, while progressive labor and environmental laws are undermined by lack of enforcement and political will.

Contemporary accounts of the Amazon have aptly depicted endangered tropical ecosystems. This study has focused, however, on varied mediators that have delineated the politics of nature and the nature of politics in the Brazilian Amazon over the course of the twentieth century. It takes as a historical watershed the era of the Estado Novo, when the centralization of state power, the rise of regional planning, and the

consolidation of the nation's professional class expanded the contestants for Amazonian resources. The Second World War, augmenting (trans)national claims on forest resources, hastened the expansion of credit markets and transportation infrastructure in the Amazon through Brazilian and U.S. state financing. It also revitalized long-distance migration and advanced technological capability and destructiveness in the region. Wartime transformations laid the ground for accelerated land enclosures, deforestation, population transfers, and proletarianization over subsequent decades. But likewise forged in the throes of global conflict were labor laws, health programs, and nationalistic pronouncements that refashioned the Amazonian poor as working-class citizens with formal legal and social rights, generating new arenas for political inclusion and struggle.

Conjured by outsiders as a pristine realm, Amazonian landscapes have been embedded in social and (geo)political conflicts since the Iberian conquest. Bounded by maps and academic disciplines, the Brazilian Amazon has been molded by competing and far-flung networks of peoples, goods, and ideas. Indeed, because the Amazon encompasses not only distinct tropical ecosystems, but fundamental debates about the meanings of modernity, the nature of the region will stir controversy for time to come.

NOTES

Introduction: The Reappearing Amazon

1. David Harvey, *Justice, Nature, and the Geography of Difference* (Cambridge, MA: Blackwell Publishers, 1996), 320.
2. Roy Nash, *The Conquest of Brazil* (New York: Harcourt, Brace, 1926), 62.
3. See Harvey, *Justice, Nature, and the Geography of Difference*, 149.
4. On the accelerated pace of human-induced environmental change in the twentieth century, see J. R. McNeill, *Something New under the Sun: An Environmental History of the Twentieth-Century World* (New York: W. W. Norton, 2000).
5. See Hugh Raffles, *In Amazonia: A Natural History* (Princeton, NJ: Princeton University Press, 2002); and Mark Harris, *Life on the Amazon: The Anthropology of a Brazilian Peasant Village* (Oxford: Oxford University Press, 2000).
6. See Eidorfe Moreira, *Conceito de Amazônia* (Rio de Janeiro: SPVEA, Coleção Araujo Lima, 1958), 4–6. On the varied early twentieth-century definitions of "the Tropics" according to cartographic, meteorological, and medical-scientific criteria, see Warwick Anderson, "The Natures of Culture," 29.
7. Instituto Socioambiental, *Almanaque Brasil socioambiental* (São Paulo: ISA, 2004), 74.
8. Ramachandra Guha and J. Martínez-Allier, *Varieties of Environmentalism: Essays North and South* (London: Earthscan, 1997), 10; Juan Martínez-Allier, *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* (Northampton, MA: Edward Elgar, 2002); and Paul E. Little, *Amazonia: Territorial Struggles on Perennial Frontiers* (Baltimore: Johns Hopkins University Press, 2001), 4.
9. I have borrowed here from Little's understanding of a cosmography. See *Amazonia*, 5. A similar approach is adopted by Arturo Escobar, *Territories*

of Difference: Place, Movements, Life, Redes (Durham, NC: Duke University Press, 2008).

10. See Arjun Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press, 1988). On commodity chains as a lens onto Latin American history that can avoid the pitfalls of simple core-periphery dichotomies, see Steven Topik, Carlos Marichal, and Zephyr Frank, eds., *From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500–2000* (Durham, NC: Duke University Press, 2006). A trailblazing approach in Latin American historiography is John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras* (Austin: University of Texas Press, 2005).
11. See Michel de Certeau, *The Writing of History*, trans. Tom Conley (New York: Columbia University Press, 1988), 66.
12. In Amazonian history, some important inroads in this area include Michael Edward Stanfield, *Red Rubber, Bleeding Trees: Violence, Slavery, and Empire in Northwest Amazonia, 1850–1933* (Albuquerque: University of New Mexico Press, 1998); Victor Leonardi, *Fronteiras amazônicas do Brasil: saúde e história social* (São Paulo: Marco Zero, 2000); and Susanna B. Hecht, *The Scramble for the Amazon and the* Lost Paradise *of Euclides da Cunha* (Chicago: University of Chicago Press, 2012). An earlier attempt in Brazilian scholarship was Clodomir Vianna Moog's *Bandeirantes e pioneiros: Paralelo entre duas culturas*, 2nd ed. (Rio de Janeiro: Globo, 1961), although the work's comparative analysis of frontier expansion in the United States and Brazil is marred by its sweeping generalizations regarding purported national character.
13. Little, *Amazonia*, 1–3.
14. A foundational text in this genre would be Euclides da Cunha, *À margem da história* (Rio de Janeiro: Academia Brasileira de Letras, 2008 [1909]). For further discussion, see David Cleary, "Towards an Environmental History of the Amazon: From Prehistory to the Nineteenth Century," *Latin American Research Review* 36, no. 2 (2001): 64–96; Eduardo Viveiros de Castro, "Images of Nature and Society in Amazonian Ethnology," *Annual Review of Anthropology* 25 (1996): 179–200.
15. For a general discussion of geography, see David N. Livingstone, *The Geographical Tradition: Episodes in the History of a Contested Enterprise* (Oxford: Blackwell, 1993); on anthropology, see Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 1983).
16. Among the vast scholarship of these authors, see, for example, Arthur Cezar Ferreira Reis, *História do Amazonas* (Belo Horizonte: Editora Itatiaia, 1989 [1931]); Leandro Tocantins, *O Rio comanda a vida: uma interpretação da Amazônia*, 7th ed. (Rio de Janeiro: Livraria J. Olympio, 1983); Samuel Benchimol, *Amazônia, um pouco-antes e além-depois* (Manaus: Umberto Calderaro, 1977).
17. See Barbara Weinstein, *The Amazon Rubber Boom, 1850–1920* (Palo Alto, CA: Stanford University Press, 1983); Maria Helena Capelato, "A borracha na economia brasileira da Primeira República," in Boris Fausto, ed., *O Brasil Republicano:*

estrutura de poder e economia, 1889–1930, vol. 3 (São Paulo: Difel, 1975), 285–307; Bradford L. Barham and Oliver T. Coomes, *Prosperity's Promise: The Amazon Rubber Boom and Distorted Economic Development* (Boulder, CO: Westview Press, 1996). For a broader overview of the Amazon's economic history, see Roberto Santos, *História econômica da Amazônia (1800–1920)* (São Paulo: T. A. Queiroz, 1980).

18. Pedro Martinello, *A "batalha da borracha" na Segunda Guerra Mundial* (Rio Branco: EDUFAC, 2004); Maria Verónica Secreto, *Soldados da borracha: trabalhadores entre o sertão e a Amazônia no governo Vargas* (São Paulo: Editora Fundação Perseu Abramo, 2007); Lúcia Arrais Morales, *Vai e vem, vira e volta: as rotas dos Soldados da Borracha* (São Paulo: Editora Annablume, 2002); Adelaide Gonçalves and Pedro Eymar Costa, eds., *Mais borracha para a Vitória* (Brasília: MMA, 2008); Xenia V. Wilkinson, "Tapping the Amazon for Victory: Brazil's 'Battle for Rubber' of World War II" (Ph.D. diss., Georgetown University, 2009).
19. See Bertha K. Becker, *Geopolítica da Amazônia: a nova fronteira de recursos* (Rio de Janeiro: Zahar, 1982); Susanna B. Hecht and Alexander Cockburn, *The Fate of the Forest: Developers, Destroyers, and Defenders of the Amazon* (New York: Harper-Perennial, 1990); Marianne Schmink and Charles H. Wood, eds., *Frontier Expansion in Amazonia* (Gainesville: University Press of Florida, 1984).
20. See Warren Dean, *Brazil and the Struggle for Rubber: A Study in Environmental History* (Cambridge: Cambridge University Press, 1987). On the mediation of nature, see Bruno Latour, *Politics of Nature: How to Bring the Sciences into Democracy*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 2004), 3–4.
21. My argument here is informed by Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993), 90.
22. Harvey, *Justice, Nature, and the Geography of Difference*, 316.
23. I have borrowed here from Richard White, "The Nationalization of Nature," *Journal of American History* 86, no. 3 (December 1999), 976–86.
24. For an overview, see Char Miller and Hal Rothman, eds., *Out of the Woods: Essays in Environmental History* (Pittsburgh: University of Pittsburgh Press, 1997); and Frank Uekoetter, ed., *The Turning Points of Environmental History* (Pittsburgh: University of Pittsburgh Press, 2010). For Latin America, see Shawn William Miller, *An Environmental History of Latin America* (Cambridge: Cambridge University Press, 2007).
25. Latour, *We Have Never Been Modern*, 54–128.
26. On the production of nature, see Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, 3rd ed. (Athens: University of Georgia Press, 2008), 49.
27. I have employed terminology from Anna Lowenhaupt Tsing, *Friction: An Ethnography of Global Connection* (Princeton, NJ: Princeton University Press, 2005), 3. For a historical monograph that explores cross-border intrigues within the Amazon, see Stanfield, *Red Rubber, Bleeding Trees*.

28. The conflation of "transnational" and U.S.-based analysis is provocatively addressed in Laura Briggs, Gladys McCormick, and J. T. Way, "Transnationalism: A Category of Analysis," *American Quarterly* 60, no. 3 (September 2008): 625–48.
29. Eric R. Wolf, *Europe and the People Without History* (Berkeley: University of California Press, 1982), ix. In Brazilian historiography, see Micol Seigel, *Uneven Encounters: Making Race and Nation in Brazil and the United States* (Durham, NC: Duke University Press, 2009).
30. "Preface: Discursive Environments for Environmental Discourses," in Paul R. Greenough and Anna Lowenhaupt Tsing, eds., *Nature in the Global South: Environmental Projects in South and Southeast Asia* (Durham, NC: Duke University Press, 2003), x.
31. See John Hemming, *Tree of Rivers: The Story of the Amazon* (New York: Thames and Hudson, 2008), 325–45; Samuel Benchimol, "Population Changes in the Brazilian Amazon," in John Hemming, ed., *Change in the Amazon Basin, Vol. 2: The Frontier after a Decade of Colonisation* (Manchester, UK: Manchester University Press, 1985), 37–38; Carleton Beals, "Future of the Amazon," *Survey Graphic* (March 1941), 150; and Earl Parker Hanson, *The Amazon: A New Frontier?* (New York: Foreign Policy Association, 1944), 17.

Chapter 1: Border and Progress

1. Hubert Herring, *Good Neighbors: Argentina, Brazil, Chile and Seventeen Other Countries* (New Haven, CT: Yale University Press, 1941), 128.
2. Hanson, *The Amazon: A New Frontier?*, 5.
3. See Stella Bresciani, "Forjar a identidade brasileira nos anos 1920–1940," in Francisco Foot Hardman, ed., *Morte e progresso: cultura brasileira como apagamento de rastros*, 2nd ed. (São Paulo: Unesp, 2005), 27–61; João Marcelo Ehlert Maia, *A terra como invenção: o espaço no pensamento social brasileiro* (Rio de Janeiro: Zahar, 2008); Seth Garfield, *Indigenous Struggle at the Heart of Brazil: State Policy, Frontier Expansion, and the Xavante Indians, 1937–1988* (Durham, NC: Duke University Press, 2001).
4. Albert O. Hirschman, *Journeys Toward Progress: Studies of Economic Policy-Making in Latin America* (New York: Twentieth Century Fund, 1963), 36.
5. McCann, *The Brazilian-American Alliance*, 16–23.
6. I have borrowed here from Albert O. Hirschman's observations on the problems of federal policymaking for Brazil's northeast. See *Journeys Toward Progress*, 17–18.
7. On history as act and narration, see Michel-Rolph Trouillot, *Silencing the Past: Power and the Production of History* (Boston: Beacon Press, 1995); on mediators who serve to shore up the poles of nature and politics, see Latour, *We Have Never Been Modern*; on the production of nature, see Smith, *Uneven Development*.
8. See Leonardo Truda to Artur de Souza Costa, January 28, 1942, FGV, CPDOC, Souza Costa, sc1941.07.21. For further discussion, see Gerson Moura, *Autonomia na dependência: a política externa brasileira de 1935 a 1942* (Rio de Janeiro: Nova Fronteira, 1980), 55–57.

9. On the invention of "the primitive," see Elazar Barkan and Ronald Bush, eds., *Prehistories of the Future: The Primitivist Project and the Culture of Modernism* (Palo Alto, CA: Stanford University Press, 1995); Fabian, *Time and the Other.*
10. See Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton, NJ: Princeton University Press, 1995).
11. I have borrowed here from the argument in Nancy P. Appelbaum, *Muddied Waters: Race, Region, and Local History in Colombia, 1846–1948* (Durham, NC: Duke University Press, 2003), 11.
12. Quoted in Teixeira Soares, *O Brasil no conflito ideólogico global, 1937–1979* (Rio de Janeiro: Civilização Brasileira, 1980), 159–60. Teixeira Soares claims that the statement was made to him by Oswaldo Aranha, although he does not specify the date or place of the meeting.
13. S. Zink, U.S. Dept. of Commerce, American Republics Unit, "The Economic Assets and Liabilities of the Amazon Valley," May 27, 1942, National Archives [herein NA], Record Group [herein RG] 234, Records of the Reconstruction Finance Corporation, Rubber Development Corporation, Box 71.
14. See, for example, Everardo Backheuser, *Problemas do Brasil: O espaço* (Rio de Janeiro: Omnia, 1933).
15. W. L. Schurz, "The Distribution of Population in the Amazon Valley," *Geographical Review* 15, no. 2 (April 1925), 206–25.
16. Agnello Bittencourt, *Corografia do estado do Amazonas* [1925] (Manaus: ACA-Fundo Editorial, 1985), 228–29.
17. Gates, *A Botanist in the Amazon*, 71–74; Schurz, "The Distribution of Population in the Amazon Valley," 206–25; and João Huascar de Figueiredo, Procuradoria Fiscal do Estado do Amazonas, to Diretor Geral da Fazenda Pública, Manaus, November 11, 1939, Arquivo Nacional [herein AN], Geral Correspondência da Presidência da República [herein GCPR], Box 176, Amazonas 1939/40.
18. M. Marinho Silva, *O caboclo da Amazônia* (Belém: Livraria Carioca, 1931), 16–17.
19. Frank D. McCann Jr., *The Brazilian-American Alliance, 1937–45* (Princeton, NJ: Princeton University Press, 1974), 389; Dennis J. Mahar, *Frontier Development Policy in Brazil: A Study of Amazonia* (New York: Praeger, 1979), 1.
20. See Charles Wagley, "Race Relations in an Amazon Community," in Wagley, ed., *Race and Class in Rural Brazil* (Paris: UNESCO, 1952), 118; 132–36.
21. See Marcos Cueto, *The Return of Epidemics: Health and Society in Peru During the Twentieth Century* (Burlington, VT: Ashgate, 2001), 4.
22. E. H. Christopherson, Chief of Party, Health and Sanitation Program in Brazil, Rio de Janeiro, April 11, 1945, NA, RG 229, Office of Interamerican Affairs, Records of the Department of Basic Economy, Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, January–August 1944, Box 22.
23. SESP and Brazilian Field Party of IIAA, Operation of Health Center in Sena Madureira, Territory of Acre, April 12, 1945. IOC, SESP, Box 17, Folder 2; Claude C. Erb, "Prelude to Point Four: The Institute of Inter-American Affairs," *Diplomatic History* 9, no. 3 (July 1985), 263.

24. The classic work on this subject is Tocantins, *O Rio comanda a vida*.
25. Preston E. James, *Latin America*, 4th ed. (New York: Odyssey Press, 1969), 837.
26. SESP, Field Summary and Completion Agreement of Project AM-CSU-4 Operation of Health Center, Cruzeiro do Sul, Acre, December 15, 1950. Instituto Oswaldo Cruz [herein IOC], Serviço Especial de Saúde Pública [herein SESP], Box 17, Folder 5.
27. Board of Economic Warfare Memorandum: Obstacles to Increased Rubber Production in South and Central America, August 31, 1942, Franklin Delano Roosevelt Presidential Library [herein FDRPL], Rubber Survey Committee [herein RSC], 1942, Documents and Reports, Box 10. See also Commander Fortunato Lopes to J. G. Araújo & Cia, a bordo o *S.S. Aripuanã* at Lábrea, December 10, 1941, Museu Amazônico [herein MA], Coleção J. G. Araújo [herein JGA], Box 1941.
28. R. Ruggles Gates, *A Botanist in the Amazon Valley: An Account of the Flora and Fauna in the Land of Floods* (London: H. F. and G. Witherby, 1927), 71–74.
29. For more extensive discussion, see James William Park, *Latin American Underdevelopment: A History of Perspectives in the United States, 1870–1965* (Baton Rouge: Louisiana State University, 1995), 31–79; U.S. Army General William Gorgas (1854–1920), quoted in A. Grenfell Price, *White Settlers in the Tropics* (New York: American Geographical Society, 1939), 5; and James Bryce, *South America: Observations and Impressions* (New York: Macmillan, 1912), 420. See also, for example, R. H. Whitbeck and Frank E. Williams, *Economic Geography of South America*, 3rd ed. (New York: McGraw Hill, 1940), 31.
30. See Gilberto Freyre's preface to Mario Travassos, *Introdução à geografia das comunicações brasileiras* (Rio de Janeiro: J. Olympio, 1942), 12.
31. For a more detailed description, see John H. Galey, "The Politics of Development in the Brazilian Amazon, 1940–1950," Ph.D. diss., Stanford University, 1977. See also Beatriz Célia C. de Mello Petey, "Aspectos da economia amazônica à época da depressão (1920–1940), *Boletim Geográfico* 31, 229 (July–August 1972): 129.
32. See Garfield, *Indigenous Struggle at the Heart of Brazil*. For a broader discussion on ordering and oversimplifying of landscapes, see James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 1998).
33. Hemming, *Tree of Rivers*, 13, 32.
34. Little, *Amazonia*, 62.
35. See David Sweet, "A Rich Realm of Nature Destroyed: The Middle Amazon Valley, 1640–1750," Ph.D. diss., University of Wisconsin, 1974.
36. Hemming, *Tree of Rivers*, 65.
37. Eric B. Ross, "The Evolution of the Amazon Peasantry," *Journal of Latin American Studies* 10, no. 2 (1978), 193–218.
38. Hemming, *Tree of Rivers*, 17–72.
39. Little, *Amazonia*, 67.
40. On the Amazon as tabula rasa, see Hecht and Cockburn, *The Fate of the Forest*; and Hecht, "The Last Unfinished Page of Genesis: Euclides da Cunha and the Amazon," *Historical Geography* 2 (2004), 43–69.

41. Hemming, *Tree of Rivers*, 97–102.
42. On the Amazon under the Directorate, see Barbara Sommer, "Negotiated Settlements: Native Amazonians and Portuguese Policy in Pará, Brazil, 1758–1798," Ph.D. diss., University of New Mexico, 2000; and Heather Flynn Roller, "Colonial Collecting Expeditions and the Pursuit of Opportunities in the Amazonian Sertão, c. 1750–1800," *The Americas* 66, no. 4 (April 2010), 435–67.
43. Hemming, *Tree of Rivers*, 102–5.
44. On the Cabanagem revolt, see Mark Harris, *Rebellion on the Amazon: The Cabanagem, Race, and Popular Culture in the North of Brazil* (New York: Cambridge University Press, 2010); Magda Ricci, "Cabanos, patriotismo e identidades: outras histórias de uma revolução," in Keila Grinberg and Ricardo Salles, eds., *O Brasil Imperial, volume II: 1831–1870* (Rio de Janeiro: Civilização Brasileira, 2009), 187–231; Weinstein, *The Amazon Rubber Boom*, 40–43.
45. Hemming, *Tree of Rivers*, 128.
46. K. E. Knorr, *World Rubber and Its Regulation* (Palo Alto, CA: Stanford University Press, 1945), 7–15.
47. Hemming, *Tree of Rivers*, 177.
48. L. J. Lambourn and A. G. Perret, "Tyres," in P. Schidrowitz and T. R. Dawson, eds., *History of the Rubber Industry* (Cambridge: W. Heffer, 1952), 213–22.
49. Austin Coates, *The Commerce in Rubber: The First 250 Years* (Singapore: Oxford University Press, 1987), 49, 80–83; and Lambourn and Perret, "Tyres," 213–22.
50. See Cosme Ferreira Filho, *A Borracha: Problema Brasileiro* (Manaus, 1938), 7–14.
51. Weinstein, *The Amazon Rubber Boom*, 227.
52. Weinstein, *The Amazon Rubber Boom*, 172.
53. Roberto Santos, *História econômica da Amazônia, 1800–1920* (São Paulo: T. A. Queiroz, 1980), 110; and John O. Browder and Brian J. Godfrey, *Rainforest Cities: Urbanization, Development, and Globalization of the Brazilian Amazon* (New York: Columbia University Press, 1997), 138.
54. See Hemming, *Tree of Rivers*, 179–82; and E. Bradford Burns, "Manaus, 1910: Portrait of a Boom Town," *Journal of Inter-American Studies* 7, no. 3 (July 1965), 400–421.
55. Weinstein, *The Amazon Rubber Boom*, 83–96.
56. See Weinstein, *The Amazon Rubber Boom*, 15–34; Petey, "Aspectos da economia amazônica à Epoca da Depressão (1920–1940)," 112–31; John Melby, "Rubber River: An Account of the Rise and Collapse of the Amazon Boom," *Hispanic American Historical Review* 22, no. 3 (August 1942), 462; Randolph R. Resor, "Rubber in Brazil: Dominance and Collapse, 1876–1945," *Business History Review* 51, no. 3 (autumn 1977), 350–52; M. H. Langford, "Science's Fight for Healthy Hevea," *Agriculture in the Americas* 6 (August 1944), 151–52.
57. On the rubber "seed snatch," see Joe Jackson, *The Thief at the End of the World: Rubber, Power and the Seeds of Empire* (New York: Viking, 2008).
58. See Lucile H. Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New Haven, CT: Yale University Press, 2002), 141–65.
59. Petey, "Aspectos da economia amazônica," 112–31; P. T. Bauer, *The Rubber Indus-*

try: A Study in Competition and Monopoly (Cambridge, MA: Harvard University Press, 1948), 25; Resor, "Rubber in Brazil," 341–56; and Banco de Crédito da Borracha, *Relatório de 1943* (March 1944), 11.

60. Melby, "Rubber River," 462; Resor, "Rubber in Brazil," 349–52; Petey, "Aspectos da economia amazônica," 112–31; Knorr, *World Rubber and Its Regulation*, 12; A. Wisniewski, *Fraudes no preparo da borracha crua* (Boletim Técnico do Instituto Agronômico do Norte, June 1949), 29.
61. Ross, "The Evolution of the Amazon Peasantry," 215.
62. Pedro Mattos, *Trinta dias em águas do Amazonas* (Rio de Janeiro: Francisco Alves, 1936), 57–59.
63. William H. Fisher, "Native Amazonians and the Making of the Amazon Wilderness: From Discourses of Riches and Sloth to Underdevelopment," in E. Melanie DuPuis and Peter Vandergeest, eds., *Creating the Countryside: The Politics of Rural and Environmental Discourse* (Philadelphia: Temple University Press, 1996), 166–203.
64. Kerbey, quoted in Weinstein, *The Amazon Rubber Boom*, 262, 327n1; and Nash, *Conquest of Brazil*, 371.
65. See Stephen Kern, *The Culture of Time and Space, 1880–1918* (Cambridge, MA: Harvard University Press, 1983).
66. Alfred E. Eckes, *The United States and the Global Struggle for Minerals* (Austin: University of Texas Press, 1979), 6.
67. Kern, *The Culture of Time and Space*, 228–32; Eckes, *The United States and the Global Struggle for Minerals*, 19, 27.
68. *Propaganda Amazonense, A Visita do Presidente Vargas e as Esperanças de Resurgimento do Amazonas* (Manaus: Imprensa Pública, 1940), 34.
69. "Manaus," n.d., NA, RG 169, Foreign Economic Administration, Office of Administrator-Records Analysis Division, Material on FEA's Program for Brazil, 1942–44, Box 965.
70. Raimundo de Menezes, *Nas ribas do rio-mar* (1928), excerpted in Carlos Heitor Castello Branco, *Macunaíma e a viagem grandota: Cartas inéditas de Mário de Andrade* (São Paulo: Quatro Artes, 1970), 94.
71. Interventoria Federal no Estado do Amazonas, *Exposição ao Exmo. Sr. Dr. Getúlio Vargas, Presidente da República, por Álvaro Maia, Interventor Federal, maio de 1941–maio de 1942* (Manaus, 1942), 59.
72. "Ver para crer," *Revista da Associação Comercial do Amazonas*, no. 287 (November 1940).
73. Hubert Maness, American Vice Consul, Market Conditions and Possibility for Increasing Production of Rubber, Manaus-Brazil, Manaus, March 26, 1941, NA, RG 166, Foreign Agricultural Service, Narrative Reports (1920–41), Brazil: Rubber-Wool.
74. The "Discurso do Rio Amazonas" is reprinted in Conselho Nacional de Geografia, *Amazônia brasileira* (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1944), 3.
75. Vania Porto Tavares, Cláudio Monteiro Considera, and Maria Thereza L. L. de

Castro e Silva, *Colonização dirigida no Brasil: suas possibilidades na região amazônica*, 2nd ed. (Rio de Janeiro: IPEA/INPES, 1979), 19–25.

76. See Moacir M. F. Silva, "Transportes na Amazonia," in *Amazônia brasileira*, 285.
77. "Encaminhamento de trabalhadores nordestinos para a Amazônia," *Revista de Imigração e Colonização* 2, no. 2 (August 1942), 9–11.
78. For a critique of Vargas's agrarian policies, particularly on the frontier, see Alcir Lenharo, *Colonização e trabalho no Brasil: Amazônia, Nordeste, e Centro-Oeste, os anos 30* (Campinas: UNICAMP, 1985); Martinello, *A "batalha da borracha,"* 55–71. For an alternative assessment, see Maria Yedda Leite Linhares and Francisco Carlos Teixeira da Silva, *Terra prometida: Uma história da questão agrária no Brasil* (Rio de Janeiro: Campus, 1999); and Cliff Welch, *The Seed Was Planted: The São Paulo Roots of Brazil's Rural Labor Movement, 1924–1964* (University Park: Pennsylvania State University Press, 1999).
79. Dulce Chaves Pandolfi, "A trajetória do norte: uma tentativa de ascenso político," in Angela Maria de Castro Gomes, ed., *Regionalismo e centralização política: partidos e Constituinte nos anos 30* (Rio de Janeiro: Nova Fronteira, 1980), 341–425.
80. See Mahar, *Frontier Development Policy in Brazil*, 3; Weinstein, *The Amazon Rubber Boom*, 225–31; and Nancy Stepan, "'The Only Serious Terror in These Regions': Malaria Control in the Brazilian Amazon," in Diego Armus, ed., *Disease in the History of Modern Latin America: From Malaria to AIDS* (Durham, NC: Duke University Press, 2003), 25–50.
81. Resor, "Rubber in Brazil," 358–59.
82. On the impact of the automobile on culture and society in Brazil and Spanish America, see Guillermo Giucci, *The Cultural Life of the Automobile: Roads to Modernity*, trans. Anne Mayagoitia and Debra Nagao (Austin: University of Texas Press, 2012), 51–106.
83. On the early development of the automobile industry in Brazil, see Paulo Cesar de Azevedo and Vladimir Sacchetta, eds., *O século do automóvel no Brasil* (São Caetano do Sul: Brasinca, 1989); Helen Shapiro, *Engines of Growth: The State and Transnational Auto Companies in Brazil* (Cambridge: Cambridge University Press, 1994), 38–40; Benedicto Heloiz Nascimento, *Formação da indústria automobilística brasileira*, Série Teses e Monografias No. 24 (Universidade de São Paulo, 1976), 18; and Joel Wolfe, *Autos and Progress: The Brazilian Search for Modernity* (Oxford: Oxford University Press, 2010).
84. Nelson Prado Alves Pinto, *Política da borracha no Brasil: A falência da borracha vegetal* (São Paulo: HUCITEC, 1984), 74–84.
85. José Amando Mendes, *Amazônia econômica, problema brasileiro* (Rio de Janeiro: A Noite, 1941), 216.
86. José Amando Mendes, *Amazônia econômica, problema brasileiro*, 113.
87. Dean, *Brazil and the Struggle for Rubber*, 85; Galey, "The Politics of Development," 31–32; "Economic Development of the Amazon Region," translation of article that appeared in *Boletim do Conselho Federal de Comércio Exterior*, June 30, 1941. NA, RG 229, Office of InterAmerican Affairs, Box 1343.
88. On U.S. foreign policy toward Brazil and Latin America during this period, see

David Green, *The Containment of Latin America: A History of the Myths and Realities of the Good Neighbor Policy* (Chicago: Quadrangle Books, 1971); Irwin F. Gellman, *Good Neighbor Diplomacy: United States Policies in Latin America, 1933–1945* (Baltimore: Johns Hopkins University Press, 1979); Stanley Hilton, *Brazil and the Great Powers, 1930–1939: The Politics of Trade Rivalry* (Austin: University of Texas Press, 1975); Moura, *Autonomia na dependência*; McCann, *The Brazilian-American Alliance*, 148–75; Elizabeth Cobbs Hoffman, *The Rich Neighbor Policy: Rockefeller and Kaiser in Brazil* (New Haven, CT: Yale University Press, 1992); N. P. Macdonald, *Hitler over Latin America* (London: Jarrolds, 1940).

89. Mario Guedes, "Inversão de Capitais na Borracha de Plantação," *Jornal de Comércio*, November 7, 1940, reprinted in *Propaganda Amazonense*, 239–44.
90. R. A. Humphreys, *Latin America and the Second World War, Volume 2, 1942–1945* (London: Athlone Press, 1982), 59; Bryce Wood, *The Making of the Good Neighbor Policy* (New York: Columbia University Press, 1961).
91. McCann, *The Brazilian-American Alliance*, 128–29.
92. Dean, *Brazil and the Struggle for Rubber*, 88.
93. McCann, *The Brazilian-American Alliance*, 125–37; and OCIAA, Division of Reports, "The Military Importance of Northeastern Brazil," August 24, 1942. NA, RG 229, Office of Inter-American Affairs-Records of the Department of Economic Development Research Division, Reports (E-25).
94. William A. M. Burden, *The Struggle for Airways in Latin America*, 77.
95. See Childs, *Geopolitics and Conflict in South America*, 34; Tambs, "Geopolitical Factors in Latin America," 32–33; Wanderley Messias da Costa, *Geografia política e geopolítica*, 183–91.
96. On Vargas's efforts to forge a technocratic cadre among public servants, see Angela Maria de Castro Gomes, "Novas elites burocráticas," in Castro Gomes, ed., *Engenheiros e economistas: novas elites burocráticas* (Rio de Janeiro: Fundação Getúlio Vargas, 1994), 1–12.
97. See Neide Gondim, *A invenção da Amazônia* (São Paulo: Editora Marco Zero, 1994); Marcio Souza, *Breve historia da Amazônia* (São Paulo: Marco Zero, 1994); Ileana Rodríguez, *Transatlantic Topographies: Islands, Highlands, Jungles* (Minneapolis: University of Minnesota Press, 2004).
98. I have borrowed here from Michel-Rolph Trouillot, *Silencing the Past*, 140.
99. Quoted in Petey, "Aspectos da economia amazônica," 130.
100. See Cosme Ferreira Filho, *A Borracha: problema brasileiro* (Manaus, 1938), 7–14.
101. See Amando Mendes, *Amazônia econômica*, 114–15.
102. Aurélio Pinheiro, *À Margem do Amazonas* (São Paulo: Companhia Editora Nacional, 1937), 45.
103. Hanibal Porto, "Memorial Dirigido à S. Excia o Sr. Presidente da República sobre o problema da borracha brasileira," Rio de Janeiro, 1939. FGV, CPDOC, Luis Simões Lopes, LSL/Porto H/1939.
104. Interventoria Federal no Estado do Amazonas, *Exposição ao Exmo. Sr. Dr. Getúlio Vargas, Presidente da República, por Álvaro Maia, Interventor Federal* (Manaus, 1939), 95.

105. Letter from Coutinho, Anníbal & Cia et al. to Getúlio Vargas, Manaus, August 21, 1939, in Samuel Benchimol, *Romanceiro da batalha da borracha*, 217–23; "Monumento ao seringueiro," *Revista da Associação Comercial do Amazonas*, no. 277 (January 1940).
106. Raymundo Moraes, *Na planicie Amazônica*, 5th ed. (São Paulo: Companhia Editora Nacional, 1939 [1926]), 34.
107. "O seringal com seus faustos e suas pobrezas," *Alto Madeira*, November 2, 1944.
108. Pinheiro, *À margem do Amazonas*, 39.
109. Francisco Galvão, "O homem e o deserto amazônicos," *Cultura Política*, 1, no. 4 (June 1941), 44–50.
110. Quoted in Octavio Ianni, *A Idéia de Brasil moderno* (São Paulo: Editora Brasiliense, 1992), 169. See also Ruben George Oliven, "O Nacional e o Regional na Construção da Identidade Brasileira," *Revista Brasileira de Ciências Sociais* 2, no. 1 (October 1986), 68–74.
111. Ianni, *A Idéia de Brasil moderno*, 164.
112. Pierre Bourdieu, *Language and Symbolic Power*, ed. John B. Thompson (Cambridge: Basil Blackwell, 1991), 223.
113. Eloina Monteiro dos Santos, *Uma liderança política cabocla: Álvaro Maia* (Manaus: Editora da Universidade do Amazonas, 1997), 23–35; Sergio Soares Braga, *Quem foi quem na Assembléia Nacional Constituinte de 1946: um perfil socioeconômico e regional da Constituinte de 1946* (Brasília: Câmara dos Deputados, Coordenação de Publicações, 1998), 175–76.
114. See Álvaro Maia, *Na vanguarda da retaguarda (Campanha da Produção da Borracha)* (Manaus: DEIP, 1943).
115. Almir de Andrade, *Contribuição à história administrativa do Brasil*, 63–66. See, for example, Raimundo Pinheiro, "A influência da borracha na civilização amazônica," *Cultura Política* 2, no. 17 (July 1942), 185–90.
116. Humphreys, *Latin America and the Second World War*, 63.
117. See William W. Mendel, "The Brazilian Amazon: Controlling the Hydra," *Military Review* 79, no. 4 (July–August 1999), 18–28; Celso Castro, ed., *Amazônia e defesa nacional* (Rio de Janeiro: Fundação Getúlio Vargas, 2006).
118. On the Peru-Ecuador conflict, see Little, *Amazonia*, 51.
119. See Carlos de Meira Mattos, *Brasil: Geopolítica e destino* (Rio de Janeiro: José Olympio Editora, 1975), 53; and René Armand Dreifuss, "Strategic Perceptions and Frontier Policies in Brazil," in Anthony Hall, ed., *Amazonia at the Crossroads: The Challenge of Sustainable Development* (London: Institute of Latin American Studies, 2000), 205–32.
120. Jayme de Barros, *A Política exterior do Brasil (1930–1940)* (Departamento de Imprensa e Propaganda, 1941), 352–53.
121. Brás Dias de Aguiar, "Geografia amazônica: nas fronteiras do Norte," *Revista Brasileira de Geografia*, 4, no. 3 (July–September 1944), 19; Moacir M. F. Silva, "Geografia das fronteiras no Brasil," *Revista Brasileira de Geografia* 4, no. 4 (October–December 1942), 749–70.
122. See Galey, "The Politics of Development," 29–30.

123. Valdir Aparecido de Souza, "(Des)ordem na fronteira: Ocupação militar e conflitos sociais na bacia do Madeira-Guaporé (30/40)," MA thesis, Universidade Estadual Paulista-Assis, 2002, 114.
124. Hanson, *The Amazon: A New Frontier?*, 18.
125. Mahar, *Frontier Development Policy in Brazil*, 1–2; Petey, "Aspectos da economia amazônica," 126.
126. Hanson, *The Amazon*, 27–28.
127. Manoel Alexandrino Ferreira da Cunha, Inspetor de Fronteiras, Relatório (1938), FGV, CPDOC, Gustavo Capanema, GC pi Cunha M 1938, Film 9, 496–555.
128. See Aluízio Ferreira to General Benedito Olimpio da Silveira, January 9, 1935, and Aluízio Ferreira to Gilson Amado, Porto Velho, July 2, 1937, Centro de Documentação Histórica de Rondônia [herein CDHR], Col. Aluízio Pinheiro Ferreira, Correspondência, Box 120.
129. See Jack Childs, *Geopolitics and Conflict in South America: Quarrels Among Neighbors* (New York: Praeger, 1985), 34; Lewis A. Tambs, "Geopolitical Factors in Latin America," in Norman A. Bailey, ed., *Latin America: Politics, Economics, and Hemispheric Security* (New York: Praeger, 1965), 32–33; Wanderley Messias da Costa, *Geografia política e geopolítica* (São Paulo: Hucitec, 1992), 183–91.
130. Péricles Melo Carvalho, "A concretização da 'Marcha para o Oeste,'" *Cultura Política* 1, no. 8 (October 1941), 14.
131. Mario Travassos, *Projeção continental do Brasil*, 3rd ed. (São Paulo: Companhia Editora Nacional, 1938), 24–29, 107. See also Julio José Chiavenato, *Geopolítica: arma do fascismo* (São Paulo: Global Editora, 1981), 40; Costa, *Geografia política e geopolítica*, 103.
132. Costa, *Geografia política e geopolítica*, 183–92.
133. Azevedo Amaral, *O Brasil na crise atual* (São Paulo: Companhia Editora Nacional, 1934), 255–57. On Azevedo Amaral, see Lucia Lippi Oliveira, "O pensamento de Azevedo Amaral," in Lucia Lippi Oliveira, Monica Pimenta Velloso, Angela Maria Castro Gomes, eds., *Estado Novo: ideologia e poder* (Rio de Janeiro: Zahar, 1982).
134. On the organicism of Vargas-era ideology, see Alcir Lenharo, *Sacralização da política* (Campinas: Papirus, 1986).
135. IPEN, Resumo do trabalho em Belém na Primeira Quinzena de agosto de 1938, Fundação Oswaldo Cruz [herein FIOC], EC/TP/IPEN/19370420; and letter from Chagas to Fontes, April 22, 1937, FIOC, EC, EC/COR.19361202.
136. See Gilberto Hochman, *A era do saneamento*: a*s bases da política de saúde pública no Brasil* (São Paulo: Hucitec/Anpocs, 1998).
137. Djalma da Cunha Batista, "Introdução," in Philippe Daou, ed., *Sobre o saneamento da Amazônia* (Manaus: Lux, 1972), n.p.; and Stepan, "'The Only Serious Terror in These Regions,'" 40–41.
138. Batista, "Introdução," n.p.
139. Gilberto Hochman and Cristina M. O. Fonseca, "O que há de novo? Políticas de saúde pública e previdência, 1937–45," in Dulce Pandolfi, ed., *Repensando o Estado Novo* (Rio de Janeiro: Editora Fundação Getúlio Vargas, 1999), 86–87.
140. Cristina M. Oliveira Fonseca, "Trabalhando com saúde pública pelo interior do

Brasil: lembranças de uma geração de sanitaristas (1930–1970), *Ciência e saúde coletiva* 5, no. 2 (2000): 393–411.

141. *Fundo Leonidas Deane: Inventário Analítico* (Rio de Janeiro: Fundação Oswaldo Cruz, 1999), 27.
142. See letter from Wilbur A. Sawyer, director of Rockefeller Foundation, International Health Division, to Evandro Chagas, May 31, 1940, FIOC, EC, EC/COR/1939/0837.
143. Stepan, "'The Only Serious Terror in These Regions,'" 30.
144. João de Barros Barreto, diretor geral do Departamento Nacional de Saúde, to diretor do Instituto Oswaldo Cruz, July 8, 1941, FIOC, EC, EC/COR/19361202.
145. See Julyan G. Peard, *Race, Place, and Medicine: The Idea of the Tropics in Nineteenth-Century Brazilian Medicine* (Durham, NC: Duke University Press, 1999).
146. See Warwick Anderson, *The Cultivation of Whiteness: Science, Health, and Racial Destiny in Australia* (New York: Basic Books, 2003); and Anderson, "Immunities of Empire: Race, Disease, and the New Tropical Medicine, 1900–1920," *Bulletin of the History of Medicine* 70, no. 1 (1996), 94–118; and Price, *White Settlers in the Tropics*, 35–36.
147. José Francisco de Araújo Lima, *Amazônia—A Terra e o Homem*, 4th ed. (São Paulo: Ed. Nacional, 1975), 16–22, 64, 99.
148. Pedro Carlos da Silva Telles, *História da Engenharia no Brasil, século XX* (Rio de Janeiro: Clavero, 1993), 721–22.
149. See Maria Inez Turazzi, *Euforia do progresso e a imposição da Ordem: A engenharia, a indústria e a organização do trabalho na virada do século XIX ao XX* (Rio de Janeiro: Marco Zero, 1989), 27–46.
150. Telles, *História da Engenharia*, 686–87.
151. See Todd A. Diacon, *Stringing Together a Nation: Cândido Mariano da Silva Rondon and the Construction of a Modern Brazil, 1906–1930* (Durham, NC: Duke University Press, 2004).
152. Telles, *História da Engenharia*, 64–84, 632–51.
153. Quoted in Telles, *História da Engenharia*, 714.
154. José Luciano de Mattos Dias, "Os engenheiros do Brasil," in Angela de Castro Gomes, ed., *Engenheiros e economistas: novas elites burocráticas* (Rio de Janeiro: Fundação Getulio Vargas, 1994), 13–81.
155. Quoted in Telles, *História da Engenharia*, 724.
156. "A Amazônia é um Mundo a Organizar," *Norte Agronômico* 5, no. 20 (July 1942–June 1943): n.p.; Henrique José de Lima, "O Estado Como Protetor," *Norte Agronômico* 4, no. 19 (April–July 1942): n.p.
157. See *Norte Agronômico* 5, no. 21 (August–September 1943): n.p.
158. Sonia Regina de Mendonça, *O Ruralismo brasileiro, 1881–1931* (São Paulo: Hucitec, 1997), 137–75.
159. Mattos Dias, "Os engenheiros do Brasil," 25–26.
160. See A. J. de Sampaio, *A alimentação sertaneja e do interior da Amazônia* (São Paulo: Editora Nacional, 1944), 165–66; Sampaio, *Biogeographia dynâmica: a natureza e o homem no Brasil* (São Paulo: Companhia Editora Nacional, 1935), 237.

161. A. J. de Sampaio, *Phytogeographia do Brasil*, 2nd ed. (São Paulo: Companhia Editora Nacional, 1938); and Sampaio, *Biogeographia dynâmica*, 210.
162. Mattos Dias, "Os engenheiros do Brasil," 46–53.
163. Paulo F. Souza, "The Brazilian Forests," in Frans Verdoorn, ed., *Plants and Plant Science in Latin America* (Waltham, MA: Chronica Botanica Company, 1945), 111–19.
164. My argument has been informed here by Arun Argawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham, NC: Duke University Press, 2005).
165. See Regina Horta Duarte, *A biologia militante: O Museu Nacional, especialização científica, divulgação do conhecimento e práticas políticas no Brasil, 1926–1945* (Belo Horizonte: Editora UFMG, 2010).
166. Felisberto C. Camargo, "Research in Tropical Brazil," *Agriculture in the Americas* 1, no. 12 (December 1941), 1–5; and see Felisberto Camargo to Berent Friele, Belém, August 13, 1942, NA, RG 229, Office of Inter-American Affairs, Records of the Department of Information, Regional Division, Coordination Committee for Brazil, General Records (E-99) 14.1 (Box 1337); "Suggested Plan for the Establishment of Rubber Plantations as Submitted to the Executive Director of the Commission for Control of the Washington Agreements by Felisberto Camargo, Director of IAN," October 22, 1945, NA, RG 166 (Foreign Agricultural Service), Narrative Reports (1942–1945), Brazil (Box 51). See also R. D. Rands, "Hevea Rubber Culture in Latin America: Problems and Procedures," in Verdoorn, *Plants and Plant Science in Latin America*, 183–99; and Dean, *Brazil and the Struggle for Rubber*.
167. See E. W. Brandes, "Rubber on the Rebound—East to West," *Agriculture in the Americas* 1, no. 3 (April 1941), 6. See also E. W. Brandes, "Progress in Hemisphere Rubber Plantation Development," in Verdoorn, ed., *Plants and Plant Science*, 199–201. A similar argument is put forth by M. H. Langford in "Science's Fight for Healthy Hevea," *Agriculture in the Americas* 6 (August 1944), 151–58.
168. Frans Verdoorn, "The Plant Scientist in the World's Turmoils," in Verdoorn, ed., *Plants and Plant Science*, xv–xxii.
169. Langford, "Science's Fight for Healthy Hevea," 151–52.
170. For comparative study of environmental challenges bred by plantation agriculture, see Soluri, *Banana Cultures*.
171. Costa, *Geografia política e geopolítica*, 191–92.
172. On historical geography, see David N. Livingstone, *The Geographical Tradition: Episodes in the History of a Contested Enterprise* (Oxford: Blackwell, 1993).
173. See Neil Smith and Anne Godlewska, "Introduction: Critical Histories of Geography," in Godlewska and Smith, eds., *Geography and Empire* (Oxford: Blackwell, 1994), 3; Moraes, *Território e história no Brasil*, 117–18; Marcelo Escolar, Silvina Quintero Palacios, and Carlos Reboratti, "Geographical Identity and Patriotism in Argentina," in David Hooson, ed., *Geography and National Identity* (Oxford: Blackwell, 1994), 347–48.
174. Moraes, *Território e história no Brasil*, 162–63; Kempton E. Webb, "Developments in Brazilian Geography During the Twentieth Century," in David J. Robinson,

ed., *Studying Latin America: Essays in Honor of Preston E. James* (Ann Arbor, MI: University Microfilms International, 1980), 183.

175. Costa, *Geografia política e geopolítica no Brasil*, 191–92.
176. See Moraes, *Território e história no Brasil*, 165–66; Webb, "Developments in Brazilian Geography," 183–84.
177. Fabio Macedo Soares Guimarães, "Divisão regional do Brasil," in Instituto Brasileiro de Geografia e Estatística, *Geografia e Educação* (Rio de Janeiro, IBGE, 1942), 69–114; Speridião Faissol, "Geography and Spatial Planning in Brazil," in Robinson, ed., *Studying Latin America*, 195–201. See also the argument in Argawal, *Environmentality*, 35–64.
178. My argument is informed here by the analytical framework set forth in Ann Laura Stoler and Frederick Cooper, "Between Metropole and Colony: Rethinking a Research Agenda," in Frederick Cooper and Ann Laura Stoler, eds., *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997), 14.
179. Livingstone, *The Geographical Tradition*, 224–25. See also Anderson, *The Cultivation of Whiteness*, 175–88; Ann Laura Stoler, "Sexual Affronts and Racial Frontiers: European Identities and the Cultural Politics of Exclusion in Colonial Southeast Asia," in Cooper and Stoler, *Tensions of Empire*, 214–15.
180. José Carlos Junqueira Schmidt, "O Clima da Amazônia," in *Amazônia brasileira*, 38. A pessimistic assessment of the Amazon's potential for European settlement is offered by Isaiah Bowman, "Possibilities of Land Settlement in South America," in Bowman, ed., *Limits of Land Settlement: A Report on Present-Day Possibilities* (New York: Council on Foreign Relations, 1937), 320–36; and Bowman, "Introduction," in *Limits of Land Settlement*, 4.
181. Pierre Deffontaines, *Geographia humana do Brasil* (Rio de Janeiro: IBGE, 1940), 66–67.
182. Carlos Miguel Delgado de Carvalho, *Geographia humana, política e econômica*, 2nd ed. (São Paulo: Companhia Editora Nacional, 1935), 198.
183. Guimarães, "Divisão regional do Brasil," in *Geografia e Educação*, 69–114; and Guimarães, "Divisão regional do Brasil," in *Revista Brasileira de Geografia* 4, no. 1 (January–March 1942), 149–56. See also Everardo Backheuser, "Fronteiras da Geologia e da Geografia e a Unidade desta Ciência," in IBGE, *Geografia e educação*, 157–59.
184. Delgado de Carvalho, "Uma concepção fundamental da geografia moderna: A 'região natural,'" *Boletim Geográfico* 2, no. 13 (April 1944), 13–14.
185. Guimarães, "Divisão regional do Brasil," in IBGE, *Geografia e educação*, 71–76.
186. See Ana Maria Daou, "Tipos e Aspectos do Brasil: Imagens e Imagem do Brasil por meio da iconografia de Percy Lau," in Zeny Rosendahl and Roberto Lobato Corrêa, eds., *Paisagem, imaginário e espaço* (Rio de Janeiro: Editora UERJ, 2001), 135–61.
187. See a critique in J. R. McDonald, *A Geography of Regions* (Dubuque, IA: W. C. Brown, 1972), 111–13. For the case of Brazil, see Faissol, "Geography and Spatial Planning in Brazil," 195–201.

188. Deffontaines, *Geografia humana do Brasil*, 67; Carvalho, *Geographia humana*, 15, 44, 217.
189. Peter Vandergeest and E. Melanie DuPuis, "Introduction," in DuPuis and Vandergeest, *Creating the Countryside: The Politics of Rural and Environmental Discourse* (Philadelphia: Temple University Press, 1996), 4.
190. See Slater, *Entangled Edens*; Gondim, *A invenção da Amazônia*; Rodriguez, *Transatlantic Topographies*; Lucia Sá, *Rain Forest Literatures: Amazonian Texts and Latin American Culture* (Minneapolis: University of Minnesota Press, 2004).
191. See Pedro Maligo, *Land of Metaphorical Desires: The Representation of Amazonia in Brazilian Literature* (New York: Peter Lang, 1998).
192. Clodomir Vianna Moog, "O ciclo do ouro negro," in *Obras de Vianna Moog*, Volume VI (Rio de Janeiro: Editora Delta, 1966), 120–26; and Lobato's endorsement of Moog on p. 9.
193. Gastão Cruls, "Arqueologia amazônica," in *Revista do Serviço do Patrimônio Histórico e Artístico Nacional* 6 (1942), 169–220. See also Daryle Williams, *Culture Wars in Brazil: The First Vargas Regime, 1930–1945* (Durham, NC: Duke University Press, 2001).
194. On Mário de Andrade's voyage to the Amazon in 1927, see Castello Branco, *Macunaíma e a viagem grandota*.
195. Antonio Cândido, *Literatura e sociedade: estudos de teoria e história literária*, 5th ed. (São Paulo: Companhia Editora Nacional, 1976), 119–22.
196. Roberto González Echevarría, "A Clearing in the Jungle: From Santa Mónica to Macondo from *Myth and Archive*," in Benigno Trigo, ed., *Foucault and Latin America: Appropriations and Deployments of Discursive Analysis* (New York: Routledge, 2002), 55–60.
197. Wilson Martins, *The Modernist Idea: A Critical Survey of Brazilian Writing in the Twentieth Century*, trans. Jack E. Tomlins (New York: New York University Press, 1970), 200–203.
198. Raul Bopp, Notas para o Exmo. Sr. Chefe do Governo Provisório, n.d. [1938?], AN, Gabinete Civil da Presidência da República, Box 92, Gov. Estadual Amazonas, 1934–38.
199. See Lelia Coelho Frota's introduction, "Mario de Andrade: Uma vocação de escritor público," in *Mario de Andrade: Cartas de trabalho-correspondência com Rodrigo Mello Franco de Andrade* (Brasília: Secretaria do Patrimônio Histórico e Artístico Nacional; Fundação Pró-Memória, 1981), 21–37; Lelia Gontijo Soares, "Mario de Andrade e folclore," in *Mario de Andrade e a Sociedade de Etnografia e Folclore no Departamento de Cultura da Prefeitura do Município de São Paulo, 1936–1939* (Rio de Janeiro: Funarte, 1983), 7.
200. Larry Rohter, "Long-Lost Trove of Music Connects Brazil to Its Roots," *New York Times*, January 25, 2007.
201. On anthropology's importance in Brazil, see Mariza G. S. Peirano, *A alteridade em contexto: a antropologia como ciência social no Brasil* (Brasília: Universidade de Brasília Departamento de Antropologia, 1999).
202. On the radio during the Vargas era, see Bryan McCann, *Hello, Hello Brazil: Popu-*

lar Music in the Making of Modern Brazil (Durham, NC: Duke University Press, 2004).

203. Ariosto Espinheira, *Viagem através do Brasil, Vol. 1, Norte: Amazonas e Pará*, 3rd ed. (São Paulo: Edições Melhoramento, 193(9)?.
204. Genaro Vidal Leite Ribeiro, "Amazônia: Problema vital," in Ministério da Agricultura, Serviço de Documentação, *Marcha para o Oeste (Conferências Culturais)*, Volume 1 (Rio de Janeiro: Ministério de Agricultura, 1946), 131–35.
205. Roberto Martins Rodrigues, *A Amazônia paraense* (Belém: Karton, 1982), 12.
206. The film is indexed in *Cinejornal brasileiro: Departamento de Imprensa e Propaganda, 1938–1946* (São Paulo: Fundação Cinemateca Brasileira, 1982), 69.
207. See, for example, Steven Topik, *The Political Economy of the Brazilian State, 1889–1930* (Austin: University of Texas Press, 1987); Robert M. Levine, *Father of the Poor?: Vargas and His Era* (Cambridge: Cambridge University Press, 1998), 1; Joel Wolfe, "The Faustian Bargain Not Made: Getúlio Vargas and Brazil's Industrial Workers, 1930–1945," *Luso-Brazilian Review* 31, no. 2 (winter 1994), 77–95. For a general review, see Maria Helena Capelato, "Estado Novo: Novas Histórias," in Marcos Cezar Freitas, ed., *Historiografia brasileira em perspectiva*, 2nd ed. (São Paulo: Contexto/USF, 1998), 183–213.
208. I have borrowed here from Antonio Carlos Robert Moraes, *Território e história no Brasil* (São Paulo: Editora Hucitec, 2002).
209. José Moraes do Carmo to Filinto Muller, Boca do Acre, October 20, 1939, Fundação Getúlio Vargas [herein FGV], Centro de Pesquisa e Documentação de História Contemporânea do Brasil [herein CPDOC], Filinto Muller, FM-Amazonas-Chp-SIPS, Folder October 1939.
210. Hirschman, *Journeys Toward Progress*, 36.
211. See Nicolau Sevcenko, *Literatura como missão: tensões sociais e criação cultural na Primeira República* (São Paulo: Companhia das Letras, 2003), 317.
212. "Discurso do Rio Amazonas," reprinted in *Amazônia brasileira* (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1944), 1.
213. I draw here on Smith, *Uneven Development*; and Paulo Henrique N. Martins, "O Nordeste e a Questão Regional: os Equívocos do Debate," in Marcos A. da Silva, ed., *República em migalhas: história regional e colonial* (São Paulo: Marco Zero, 1990), 51–66.
214. See, for example, José David Saldívar, *Border Matters: Remapping American Cultural Studies* (Berkeley: University of California, 1997); Andrés Reséndez, *Changing National Identities at the Frontier: Texas and New Mexico, 1800–1850* (Cambridge: Cambridge University Press, 2004); Richard Lee Turits, "A World Destroyed, a Nation Imposed: The 1937 Haitian Massacre in the Dominican Republic," *Hispanic American Historical Review* 82, no. 3 (August 2002), 589–635; Samuel Truett, *Fugitive Landscapes: The Forgotten History of the U.S.-Mexico Borderlands* (New Haven: Yale University Press, 2006).
215. Recent scholarship has looked at some of the political, economic, and environmental issues involved in the integration of the Brazilian Amazon with neighboring countries in South America. See Luis E. Aragón and José Aldemir de

Oliveira, eds., *Amazônia no cenário sul-americano* (Manaus: EDUA, 2009). For southern Brazil, an important work focused on borderlands history is John Chasteen, *Heroes on Horseback: A Life and Times of the Last Gaucho Caudillos* (Albuquerque: University of New Mexico Press, 1995).

Chapter 2: "The Quicksands of Untrustworthy Supply"

1. Hanson, *The Amazon: A New Frontier?*, 14.
2. Caryl P. Haskins, *The Amazon: The Life History of a Mighty River* (Garden City, NY: Doubleday, Doran, 1943), 149.
3. Jonathan Marshall, *To Have and Have Not: Southeast Asian Raw Materials and the Origins of the Pacific War* (Berkeley: University of California Press, 1995), 14, 64, 85.
4. Alfred E. Eckes, Jr., *The United States and the Global Struggle for Minerals* (Austin: University of Texas Press, 1979), 10, 58. See also Stephen G. Bunker and Paul S. Ciccantell, *Globalization and the Race for Resources* (Baltimore: Johns Hopkins University Press, 2005).
5. Austin Coates, *The Commerce in Rubber: The First 250 Years* (Singapore: Oxford University Press, 1987), 137–39.
6. Charles Morrow Wilson, *Trees and Test Tubes: The Story of Rubber* (New York: Henry Holt, 1943), 222–25; Alfred Lief, *The Firestone Story: A History of the Firestone Tire & Rubber Company* (New York: Whittlesey House, 1951), 264.
7. See Jesse Jones, *Fifty Billion Dollars: My Thirteen Years with the RFC (1932–1945)* (New York: Macmillan, 1951), 402.
8. James B. Conant, Karl T. Compton, and Bernard M. Baruch, Report of the Rubber Survey Committee, 5, Franklin D. Roosevelt Presidential Library, Official File [herein OF] 510, Box 3.
9. Wilson, *Trees and Test Tubes*, 162–66.
10. William M. Tuttle, Jr. "The Birth of an Industry: The Synthetic Rubber 'Mess' in World War II," *Technology and Culture* 22, no. 1 (January 1981), 35–67.
11. Conant, Compton, and Baruch, Report of the Rubber Survey Committee, 12.
12. Richard Polenberg, *War and Society: The United States, 1941–1945* (Philadelphia: Lippincott, 1972), 17–18; P. T. Bauer, *The Rubber Industry: A Study in Competition and Monopoly* (Cambridge, MA: Harvard University Press, 1948), 292–95; M. S. Hessel, W. J. Murphy, and F. A. Hessel, *Strategic Materials in Hemispheric Defense* (New York: Hastings House, 1942), 10; John Morton Blum, *V Was for Victory: Politics and American Culture during World War II* (New York: Harcourt Brace Jovanovich, 1976), 23.
13. Bauer, *The Rubber Industry*, 292–97; *Synthetic Rubber: The Story of an Industry* (New York: International Institute of Synthetic Rubber Producers, 1973), 34.
14. Conant, Compton, and Baruch, Report of the Rubber Survey Committee, 56; and Frank Kelley, "23,000 tons of Rubber for U.S. expected from Amazon in 1943," *New York Herald Tribune*, November 25, 1943.
15. Dean, *Brazil and the Struggle for Rubber*, 93.
16. Martinello, *A "batalha da borracha" na Segunda Guerra Mundial*, 85, 209.

17. Harvey, *Justice, Nature, and the Geography of Difference*, 147.
18. Conant, Compton, Baruch, Report of the Rubber Survey Committee, 16.
19. Eckes, *The United States and the Global Struggle for Minerals*, x.
20. *Synthetic Rubber: The Story of an Industry*, 8; Bauer, *The Rubber Industry*, 287–88.
21. Wilson, *Trees and Test Tubes*, xi.
22. Arjun Appadurai, "Introduction: Commodities and the Politics of Value," in Arjun Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press, 1986), 5.
23. Howard Wolf and Ralph Wolf, *Rubber: A Story of Glory and Greed* (New York: Covici Friede, 1936), 402.
24. Knorr, *World Rubber and Its Regulation*, 40. See also P. W. Barker, "World Rubber Consumption," *Commerce Reports for November 11, 1939*, 1036–37.
25. Hessel, Murphy, and Hessel, *Strategic Materials*, 6.
26. Marshall, *To Have and Have Not*, 1–2.
27. Knorr, *World Rubber and Its Regulation*, 3.
28. Hessel, Murphy, and Hessel, *Strategic Materials*, 7; Benjamin H. Hunnicutt, *Brazil: World Frontier* (New York: Van Nostrand, 1949), 103. For a global history of rubber, see John Tully, *The Devil's Milk: A Social History of Rubber* (New York: Monthly Review Press, 2011).
29. Carter R. Bryan, "Rubber for Tires: Today's Lesson in Foreign Trade," *Brazil* (March 1942), 20.
30. Knorr, *World Rubber and Its Regulation*, 46.
31. David Dietz, *The Goodyear Research Laboratory* (Akron: Goodyear Tire and Rubber Company, 1943), 31; Knorr, *World Rubber and Its Regulation*, 56.
32. Wilson, *Trees and Test Tubes*, 144.
33. James J. Flink, *The Automobile Age* (Cambridge, MA: MIT Press, 1988), 28–44, 131, 189.
34. Flink, *The Automobile Age*, 104–82. See also Michael L. Berger, *The Automobile in American History and Culture: A Reference Guide* (Westport, CT: Greenwood Press, 2001), xxi; Harvey S. Firestone, *The Romance and Drama of the Rubber Industry* (Akron, OH, 1936), 21.
35. Norman Beasley, *Men Working: A Story of the Goodyear Tire & Rubber Company* (New York: Harper and Brothers, 1931), 294.
36. Lief, *The Firestone Story*, 47–50, 139–44; and Richard P. Tucker, *Insatiable Appetite: The United States and the Ecological Degradation of the Tropical World* (Berkeley: University of California Press, 2000), 244.
37. Beasley, *Men Working*, 222–26; Wilson, *Trees and Test Tubes*, 144; Lief, *The Firestone Story*, 9–14.
38. Wilson, *Trees and Test Tubes*, xii, 148; Wolf and Wolf, *Rubber*, 355. See also Jean Le Bras, *Introduction to Rubber*, trans. J. H. Goundry (New York: Hart, 1969), 94–95.
39. Dietz, *The Goodyear Research Laboratory*, 22.
40. Firestone, *The Romance and Drama of the Rubber Industry*, 12.
41. On "modernity," see Marshall Berman, *All That Is Solid Melts into Air: The Experience of Modernity* (New York: Penguin Books, 1988), 15–20.

42. On rubber, see P. W. Litchfield, *Industrial Voyage: My Life as an Industrial Lieutenant* (Garden City, NY; Doubleday, 1954).
43. See Jean Baudrillard, *Selected Writings*, ed. Mark Poster (Palo Alto, CA: Stanford University Press, 1988), 48; and Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920–1940* (Berkeley: University of California Press, 1985).
44. Firestone, *The Romance and Drama*, 17; Lief, *The Firestone Story*, 198, 248.
45. See Amy Kaplan, "'Left Alone with America': The Absence of Empire in the Study of American Culture," in Amy Kaplan and Donald E. Pease, eds., *Cultures of United States Imperialism* (Durham, NC: Duke University Press, 1993), 14–15. This theme has been explored in the Brazilian context in Micol Seigel, *Uneven Encounters: Making Race and Nation in Brazil and the United States* (Durham, NC: Duke University Press, 2009).
46. Park, *Latin American Underdevelopment*, 52–53; Frederick B. Pike, *The United States and Latin America: Myths and Stereotypes of Civilization and Nature* (Austin: University of Texas Press, 1992), 1, 21. More broadly, see Michael Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ithaca, NY: Cornell University Press, 1989).
47. Firestone, *The Romance and Drama*, 19.
48. Wilson, *Trees and Test Tubes*, 245.
49. See the discussion of "commercial geography" in Smith, *Uneven Development*, 138–43.
50. Joseph L. Apodaca, "Can the Americas Live Alone?" *Agriculture in the Americas* 1, no. 1 (Feb. 1941), 10. On U.S. efforts to find alternate plant sources for latex during the interwar and wartime eras, see Mark R. Finlay, *Growing American Rubber: Strategic Plants and the Politics of National Security* (New Brunswick, NJ: Rutgers University Press, 2009).
51. Fernando Coronil, *The Magical State: Nature, Money, and Modernity in Venezuela* (Chicago: University of Chicago Press, 1997), 29.
52. Marshall, *To Have and Have Not*, 23; and Knorr, *World Rubber*, 38–39.
53. Harvey, *Justice, Nature and the Geography of Difference*, 232.
54. Eckes, *The United States and the Global Struggle for Minerals*, 27; Coates, *The Commerce in Rubber*, 191; Marshall, *To Have and Have Not*, 4.
55. E. L. Demmon, "Rubber Production Opportunities in the American Tropics," *Journal of Forestry* 40, no. 3 (March 1942), 209; Dean, *Brazil and the Struggle for Rubber*, 69; Stephen D. Krasner, *Defending the National Interest: Raw Materials Investments and U.S. Foreign Policy* (Princeton, NJ: Princeton University Press, 1978), 101.
56. Eckes, *The United States and the Global Struggle for Minerals*, 103–4.
57. See Marshall, *To Have and Have Not*, xi, 13, and 22–23.
58. See, for example, Seigel's discussion of U.S. responses to Brazil's coffee valorization policy in *Uneven Encounters*, 13–66.
59. Eckes, *The United States and the Global Struggle for Minerals*, 36, 46; Knorr, *World Rubber and Its Regulation*, 58–59, 80; Marshall, *To Have and Have Not*, 5–6; C. A.

Gehlsen, *World Rubber Production and Trade: Economic and Technical Aspects, 1935–1939* (Rome, 1940), 17–18; Krasner, *Defending the National Interest*, 98–100.

60. Gehlsen, *World Rubber Production and Trade*, 27–33.
61. Knorr, *World Rubber and Its Regulation*, 5, 70, 167; Bauer, *The Rubber Industry*, 207–9.
62. Hebert Feis, *Seen from E.A.: Three International Episodes* (New York: Knopf, 1947), 20–33.
63. Tucker, *Insatiable Appetite*, 241–47.
64. Knorr, *World Rubber and Its Regulation*, 72–78, 174–75; Wolf and Wolf, *Rubber*, 238.
65. Pinto, *Política da borracha*, 53–56.
66. Eckes, *The United States and the Global Struggle for Minerals*, 103–4; Krasner, *Defending the National Interest*, 101–6.
67. See Bauer, *The Rubber Industry*; Wolf and Wolf, *Rubber*, 360–64; Knorr, *World Rubber and Its Regulation*, 13, 43–47; Ernest B. Fricke, "The New Deal and the Modernization of Small Business: The McCeary Tire & Rubber Company, 1930–1940," in Robert Himmelberg, *Survival of Corporatism During the New Deal Era, 1933–1945* (New York: Garland, 1994), 78.
68. Wolf and Wolf, *Rubber*, 238, 460.
69. Knorr, *World Rubber and Its Regulation*, 43–44; J. J. Reid, "Marketing of Raw Rubber," in Schidrowitz and Dawson, *History of the Rubber Industry*, 343.
70. Fricke, "The New Deal," 78–79; Wolf and Wolf, *Rubber*, 460; Lief, *The Firestone Story*, 111.
71. Dietz, *The Goodyear Research Laboratory*, 22.
72. Knorr, *World Rubber and Its Regulation*, 87.
73. Feis, *Seen from E.A.*, 13–27; Marshall, *To Have and Have Not*, 34–35.
74. Feis, *Seen from E.A.*, 48–49, 70–77.
75. OIAA, Research Division (Confidential), Brazil-United States, Activities and Future Possibilities, July 1944, Rockefeller Archive Center [herein RAC], Record Group [herein RG] 4, Nelson A. Rockefeller [herein NAR] Personal Series O, Subseries 1, Box 4, Folder 3; see also Luiz de Miranda Corrêa, *A Borracha da Amazônia e a II Guerra Mundial* (Manaus: Editora Governo do Estado do Amazonas, 1967), 44–45. Only 2,067 tons of Brazilian rubber were imported by the United States from June 1941 to January 1942. Leonardo Truda to Artur de Souza Costa, January 28, 1942, FGV, CPDOC, Sousa Costa, SC1941.07.21.
76. Jones, *Fifty Billion Dollars*, 399; Feis, *Seen from E.A.*, 60–61.
77. Polenberg, *War and Society*, 11; Feis, *Seen from E.A.*, 81–82; Tuttle, "The Birth of an Industry," 65; The Goodyear Tire and Rubber Co., *43rd Annual Report to Stockholders, 1941* (Akron, Ohio), 5.
78. Wallace to Roosevelt, Washington, March 26, 1942, FDRPL, OF 4226, Board of Economic Warfare 1942, Box 1; Michael Straight, "Making Over the Cabinet," *New Republic*, March 9, 1942.
79. Jones, *Fifty Billion Dollars*, 396–97.
80. Feis, *Seen from E.A.*, 65–66, 81–82.
81. Eckes, *The United States and the Global Struggle for Minerals*, 94–101.

82. Bauer, *The Rubber Industry*, 289–92; Conant, Compton, and Baruch, Report of the Rubber Survey Committee, 13.
83. Tuttle, "The Birth of an Industry," 65; B. F. Goodrich Company, *Bricks without Straw: The Story of Synthetic Rubber, as Told Within the B. F. Goodrich Company* (Akron, OH: B. F. Goodrich Company, 1944), 11.
84. Blum, *V Was for Victory*, 124–40; "Covering Up for Business," *New Republic*, April 6, 1942.
85. *Synthetic Rubber: The Story of an Industry*, 18; Bauer, *The Rubber Industry*, 289–91; W. J. S. Naunton, "Synthetic Rubber," in P. Schidrowitz and T. R. Dawson, eds., *History of the Rubber Industry* (Cambridge: W. Heffer, 1952), 100–109.
86. Bauer, *The Rubber Industry*, 291; B. F. Goodrich Company, *Bricks without Straw*, 11, 16; Polenberg, *War and Society*, 15.
87. Louis Johnson to Roosevelt, November 15, 1936, FDRPL 5, OF 510, Rubber Industry, Box 1.
88. Jones, *Fifty Billion Dollars*, 405.
89. Joseph A. Russell, "Fordlandia and Belterra, Rubber Plantations on the Tapajos River, Brazil," *Economic Geography* 18 (1942), 126–44.
90. Krasner, *Defending the National Interest*, 102–4.
91. See Firestone, *The Romance and Drama*, 106–7; Krasner, *Defending the National Interest*, 102–6; Tucker, *Insatiable Appetite*, 255–57; Rosenberg, *Spreading the American Dream*, 133–34.
92. On the Ford plantations, see Greg Grandin, *Fordlandia: The Rise and Fall of Henry Ford's Forgotten Jungle City* (New York: Metropolitan, 2009), and John Galey, "Industrialist in the Wilderness: Henry Ford's Amazon Venture," *Journal of Interamerican Studies and World Affairs* 21, no. 2 (May 1979), 261–89.
93. Galey, "Industrialist in the Wilderness," 261–89; Russell, "Fordlandia and Belterra," 136.
94. Gastão Cruls, "Impressões de uma visita à Companhia Ford Industrial do Brasil," in *Amazônia Brasileira* (Rio de Janeiro: IBGE, 1944), 269–77.
95. Russell, "Fordlandia and Belterra," 136–39.
96. Dean, *Brazil and the Struggle for Rubber*, 77–81.
97. Russell, "Fordlandia and Belterra," 126–44.
98. Cruls, "Impressões de uma visita," 274.
99. The information on Ford was reported in *O Jornal*, May 7, 1941. See also Galey, "Industrialist in the Wilderness," 261–89.
100. Resor, "Rubber in Brazil," 366.
101. Krasner, *Defending the National Interest*, 331.
102. John Gunther, *Inside Latin America* (New York: Harper and Brothers, 1941), 14–15.
103. Frances Norene Ahl, *Two Thousand Miles up the Amazon* (Boston: The Christopher Publishing House, 1941), 131.
104. David Rock, "War and Postwar Intersections: Latin America and the United States," in Rock, ed., *Latin America in the 1940s: War and Postwar Transition* (Berkeley: University of California Press, 1994), 23.

105. Brandes, "Rubber on the Rebound," 6–7; Langford, "Science's Fight for Healthy Hevea," 151–58; Dean, *Brazil and the Struggle for Rubber*, 87–88.
106. See Brandes, "Rubber on the Rebound," 4; Dean, *Brazil and the Struggle for Rubber*, 88–92; Knorr, *World Rubber and Its Regulation*, 40; T. D. Mallery, "Rubber Studies Begin," *Agriculture in the Americas* 1, no. 12 (December 1941), 5–6.
107. Mark L. Kleinman, *A World of Hope, a World of Fear: Henry A. Wallace, Reinhold Niebuhr, and American Liberalism* (Columbus: Ohio State University Press, 2000), 88–90, 113; Blum, *V Was for Victory*, 287.
108. Irwin F. Gellman, *Good Neighbor Diplomacy* (Baltimore: Johns Hopkins University Press, 1979), 157–58.
109. Carlton Beals, *Pan America* (Boston: Houghton Mifflin, 1940), 492.
110. See United States Tariff Commission, *Rubber: Possibilities of Producing Rubber in the United States and Rubber Conservation* (Washington, DC: September 1941); on the 1940 report of the U.S. Army and Navy Munitions, see Marshall, *To Have and Have Not*, 13; *Bricks without Straw*, 11.
111. See Apodaca, "Can the Americas Live Alone?" 11; Wilson, *Trees and Test Tubes*, 81, 217; Ahl, *Two Thousand Miles*, 129–30.
112. Beals, *Pan America*, xi–xiv, 454–76, 499–500.
113. Apodaca, "Can the Americas Live Alone?" 11.
114. Justus D. Doenecke, ed., *In Danger Undaunted: The Anti-Interventionist Movement of 1940–1941 as Revealed in the Papers of the America First Committee* (Stanford, CA: Hoover Institution Press, 1990), 6; Alton Frye, *Nazi Germany and the American Hemisphere, 1933–1941* (New Haven, CT: Yale University Press, 1967), 152–67.
115. Quoted in Marshall, *To Have and Have Not*, 27–28.
116. For La Follette, see *Congressional Record*, February 24, 1941, 1308. See also Doenecke, *In Danger Undaunted*, 154.
117. Beals, *Pan America*, xi–xiv, 454–76, 499–500.
118. See, for example, Paul Farmer, *AIDS and Accusation: Haiti and the Geography of Blame* (Berkeley: University of California Press, 1992); Mary A. Renda, *Taking Haiti: Military Occupation and the Culture of U.S. Imperialism, 1915–1940* (Chapel Hill: University of North Carolina Press, 2001).
119. Anna Witherspoon, *Let's See South America* (Dallas: Southern Publishing, 1939), 446, 459.
120. William La Varre, *Southward Ho!: A Treasure Hunter in South America* (New York: Doubleday, Doran, 1940), 115. See also Rose Brown and Bob Brown, *Amazing Amazon* (New York: Modern Age, 1942), 165.
121. Harold Noice, *Back of Beyond* (New York: G. P. Putnam, 1939), 31.
122. Earl Parker Hanson, *Journey to Manáos* (New York: Reynal and Hitchcock, 1938), 307.
123. Beals, *Pan America*, xi–xiv, 454–76, 499–500.
124. Beals, "Future of the Amazon," *Survey Graphic* (March 1941), 149–50, 194–95. For a critical biography of Beals, see John A. Britton, *Carleton Beals: A Radical Journalist in Latin Americ*a (Albuquerque: University of New Mexico Press, 1987).
125. Carleton Beals, *Dawn over the Amazon* (New York: Duell, Sloan, and Pearce, 1943).

126. See Pike, *FDR's Good Neighbor Policy: Sixty Years of Generally Gentle Chaos* (Austin: University of Texas Press, 1995), 177–84.
127. Quoted in Pike, *The United States and Latin America*, 273.
128. Samuel J. Walker, *Henry A. Wallace and American Foreign Policy* (Westport, CT: Greenwood Press, 1976), 86; Kleinman, *A World of Hope, a World of Fear*, 116–21.
129. Blum, *V Was for Victory*, 280; Gellman, *Good Neighbor Diplomacy*, 44, 54.
130. See, for example, Roderick Nash, *Wilderness and the American Mind*, 3rd ed. (New Haven, CT: Yale University Press, 1982); Kerwin Lee Klein, *Frontiers of Historical Imagination: Narrating the European Conquest of Native America, 1890–1990* (Berkeley: University of California Press, 1997). On the limitations of the frontier as a pan-American symbol in Brazil during this era, see Robert Wegner, *A conquista do oeste: a fronteira na obra de Sérgio Buarque de Holanda* (Belo Horizonte: Editora Horizonte, 2000).
131. I am borrowing here from Richard Drayton's analysis of British imperial botanical collection as rooted, in part, in providentialist visions of Edenic abundance. See Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven, CT: Yale University Press, 2000).
132. See Ahl, *Two Thousand Miles*, 18–19, 119.
133. Carl Spaeth, assistant director, OCIAA, to Will Clayton, RFC, February 6, 1942, and C. B. Manifold to Howard Klossner, March 11, 1942, both in Rockefeller Archive Center [RAC], Rockefeller Family, RG 4, NAR Personal, Series O, Washington, DC, Subseries 1, Box 10, Folder 78.
134. Nelson Rockefeller to Berent Friele, September 24, 1941, NA, RG 229, Office of Inter-American Affairs, Records of the Department of Information, Regional Division, Coordination Committee for Brazil, General Records (E-99) 53.2 [Box 1343].
135. Michael Gannon, "Invade Brazil?!" *U.S. Naval Institute Proceedings* 125, no. 10 (October 1999): 58–66. I wish to thank Felipe Cruz for this reference.
136. McCann, *The Brazilian-American Alliance*, 267–68; Gerson Moura, *Autonomia na dependência: a política externa brasileira de 1935 a 1942* (Rio de Janeiro: Nova Fronteira, 1980), 167–68.
137. See Stanley E. Hilton, "Brazilian Diplomacy and the Washington-Rio de Janeiro 'Axis' During the World War II Era," *Hispanic American Historical Review* 59, no. 2 (May 1979), 201–31; Moura, *Autonomia na dependência*; Humphreys, *Latin America and the Second World War*, 70; McCann, *The Brazilian-American Alliance*.
138. Report on the Operations of Rubber Development Corporation, February 23, 1943 to August 31, 1944, Washington, September 30, 1944, PUL, RDC, ADR, Box 3, RDC: History and Organization.
139. Roberto Ribeiro Corrêa, "BASA: Seis décadas de mudança institucional," in Armando Dias Mendes, ed., *Amazônia: Terra e Civilização*, vol. 2 (Belém: BASA, 2004), 561.
140. See McCann, *The Brazilian-American Alliance*, 268–69.
141. Cary Reich, *The Life of Nelson A. Rockefeller: Worlds to Conquer, 1908–1958* (New York: Doubleday, 1996), 241.

142. Relatório Especial do SESP, Postos de Higiene e Hospitais Construidos pelo SESP no Estado do Pará, 1942–1945, FIOC, SESP II, Box 11. For a detailed study of the Special Health Service, see André Luiz Vieira de Campos, *Políticas internacionais de saúde na Era Vargas: o Serviço Especial de Saúde, 1942–1960* (Rio de Janeiro: Editora Fiocruz, 2006).
143. Annual Report Comissão Brasileiro-Americana de Produção de Géneros Alimentícios, September 1942–September 1943. NA, RG 229, Office of Inter-American Affairs, Records of the Dept. of Information Regional Division, Coordination Committee for Brazil, General Records (E-99) 13.1–14.1 (Box 1336).
144. Walter J. Donnelly, Counselor of Embassy for Economic Affairs, "Report of the Rubber Development Program in the Amazon Valley," American Embassy, Rio de Janeiro, June 5, 1943. NA, RG 229, Office of Inter-American Affairs, Records of the Department of Information, Regional Division, Coordination Committee for Brazil, General Records (E-99) 12.1–13.1 [Box 1333]; Donald K. Nelson to Charles I. Faddis, April 22, 1942, FDRPL, OF 510, Rubber Industry, Jan.–Sept. 1942, Box 1; "Como se vai operar o abastecimento do Vale Amazônico," *Alto Madeira*, April 22, 1943.
145. See McCann, *The Brazilian-American Alliance*, 264; and Moniz Bandeira, *Presença dos Estados Unidos no Brasil: Dois Séculos de História* (Rio de Janeiro: Civilização Brasileira, 1973), 285.
146. Quoted in Hilton, "Brazilian Diplomacy and the Washington-Rio de Janeiro 'Axis,'" 214.
147. Richard Polenberg, "The Decline of the New Deal, 1937–1940," in John Braeman, Robert H. Bremner, and David Brody, eds., *The New Deal* (Columbus: Ohio State University Press, 1975), 263.
148. Walker, *Henry A. Wallace*, 94–95; and Comments on the Statement Made by Jesse Jones, Secretary of Commerce, on July 5, 1943. FDRPL, Henry A. Wallace, Papers as Vice President 1941–45, General Correspondence Box 61.
149. M. B. Wolf, chief counsel, Rubber Division of BEW to R. J. Levy, assistant chief, Rubber Division, November 16, 1942. NA, RG 169, Foreign Economic Administration, Board of Economic Warfare, General Counsel, Box 41; Milo Perkins to Bernard M. Baruch, James B. Conant, and Carl T. Compton, August 16, 1942. FDRPL, Rubber Survey Committee, 1942, Box 3, Documents, vols. 1–3.
150. Morris S. Rosenthal, assistant director of BEW, to W. L. Clayton, assistant secretary of commerce, Washington, September 22, 1942. NA, RG 169, Foreign Economic Administration, Board of Economic Warfare, General Counsel, Box 40; Blum, *V Was for Victory*, 283.
151. Milo Perkins to William Jeffers, January 23, 1943. NA, RG 169, Foreign Economic Administration, Board of Economic Warfare, General Counsel, Box 41.
152. Edward Schapsmeier and Frederick H. Schapsmeier, *Prophet in Politics: Henry A. Wallace and the War Years, 1940–1965* (Ames: Iowa State University Press, 1971), 57.
153. Rosenberg, *Spreading the American Dream*, 10–11. See also D. H. Allen, chairman, Otis Astoria Corporation to W. L. Clayton, deputy federal loan administrator, Federal Loan Agency, February 24, 1942. NA, RG 234, Box 31; Douglas H. Allen,

president, Rubber Development Corporation, Report on the Operations of Rubber Development Corporation, February 23, 1943, to August 31, 1944, Washington, September 30, 1944. PUL, RDC, ADR Box 3, Folder RDC-History and Organization.

154. Walker, *Henry A. Wallace*, 93–95; Kleinman, *A World of Hope*, 139–47; Blum, *V Was for Victory*, 281–82; Reich, *The Life of Nelson A. Rockefeller*, 196; David Brody, "The New Deal and World War II," 300; Rosenberg, *Spreading the American Dream*, 170.
155. See Henry Agard Wallace, *The Price of Vision: The Diary of Henry A. Wallace*, ed. John Morton Blum (Boston: Houghton Mifflin, 1973), 82, 188–89; and H. A. Wallace to E. N. Bresman, director, Agricultural Division, OCIAA, October 1, 1942. FDRPL, Henry A. Wallace Papers as Vice President 1941–45, General Correspondence, Box 9.
156. Schapsmeier and Schapsmeier, *Prophet in Politics*, 59.
157. Comments on the Statement Made by Jesse Jones, secretary of commerce, on July 5, 1943. FDRPL, Henry A. Wallace, Papers as Vice President 1941–45, General Correspondence, Box 61.
158. Paul R. Hays, chief, Rubber Division, Development Branch, to Morris S. Rosenthal, assistant director, 1942. NA, RG 169, Box 41. See also Bressman to Wallace, August 31, 1942. FDRPL, Henry A. Wallace Papers as Vice President 1941–45, General Correspondence, Box 9.
159. Arthur Paul, BEW acting assistant director in charge of Office of Imports, to Milo Perkins, January 13, 1943. NA, RG 169, Box 40; Paul R. Hays, chief, Rubber Division, Development Branch, to Morris S. Rosenthal, assistant director, 1942. NA, RG 169, Box 41.
160. Board of Economic Warfare Memorandum: Obstacles to Increased Rubber Production in South and Central America, August 31, 1942, FDRPL, Rubber Survey Committee, 1942, Documents and Reports, Box 10; Henry A. Wallace, "Economic Warfare-The War Behind the War," *Army and Navy Journal*, August 29, 1942; H. A. Wallace to W. L. Clayton, July 2, 1942. FDRPL, Henry A. Wallace Papers as Vice President 1941–45, General Correspondence, Box 14.
161. George M. Reynolds, chief, Development Branch to Morris Rosenthal, assistant director, May 16, 1942. FDRPL, Henry A. Wallace Papers as Vice President, General Correspondence, Box 56; Arthur Paul, BEW acting assistant director in charge of Office of Imports to Milo Perkins, January 13, 1943. NA, RG 169, Foreign Economic Administration, Board of Economic Warfare, General Counsel, Box 40; D. H. Allen, president, RDC, Memorandum Prepared by Mr. Douglas H. Allen in Response to a Request for Information as to the "Amazon Project" and His Relationship Thereto, January 14, 1944. PUL, RDC, ADR, Box 3, Rubber Development Corp.-Hist-Org.
162. Rosenberg, *Spreading the American Dream*, 191.
163. See H. A. Wallace to E. N. Bresman, director, Agricultural Division, OCIAA, October 1, 1942. FDRPL, Henry A. Wallace Papers as Vice President 1941–45, General Correspondence Box 9; and Wallace, *The Price of Vision*, 82, 188–89.

164. Wilson, *Trees and Test Tubes*, 160–62, 248–52.
165. David Green, *The Containment of Latin America: A History of the Myths and Realities of the Good Neighbor Policy* (Chicago: Quadrangle Books, 1971), 120–21.
166. Rosenberg, *Spreading the American Dream*, 55; Walker, *Henry A. Wallace*, 86.
167. See Cobbs Hoffman, *The Rich Neighbor Policy*, 59; and Gerson Moura, *Tio Sam chega ao Brasil: a penetração cultural americana* (São Paulo: Brasiliense, 1984), 56.
168. Cobbs Hoffman, *The Rich Neighbor Policy*, 39–41.
169. See Frederick Cooper and Ann Laura Stoler, "Between Metropole and Colony: Rethinking a Research Agenda," in Cooper and Stoler, eds., *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997), 5.
170. On the historic challenges to wage labor and capitalist mode of production on the seringais, see Weinstein, *The Amazon Rubber Boom*; and Santos, *História econômica da Amazônia*, 114–15.
171. Cobbs Hoffman, *The Rich Neighbor Policy*, 67.
172. Quoted in Walker, *Henry A. Wallace*, 91.
173. Blum, *V Was for Victory*, 284–85; Schapsmeier and Schapsmeier, *Prophet in Politics*, 51–55.
174. Jones, *Fifty Billion Dollars*, 489.
175. D. H. Allen, chairman, Otis Astoria Corporation to W. L. Clayton, deputy federal loan administrator, Federal Loan Agency, February 24, 1942 [52], and S. M. McAshan Jr. to W. L. Clayton, September 18, 1942. NA, RG 234, Box 71; D. H. Allen, president, RDC, Memorandum Prepared by Mr. Douglas H. Allen in Response to a Request for Information as to the "Amazon Project" and his Relationship Thereto, January 14, 1944, PUL, RDC, ADR, Box 3, Folder 10, Doc. 6.
176. Green, *The Containment of Latin America*, 196; Rock, "War and Postwar Intersections," 26.
177. R. B. Bogardus to Mr. Bicknell, Washington, October 14, 1942. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Central Files 1942–1949, Booth Steamship Company thru Brazil-Gen. Cor. 10/42–12/31/42 Parts 3 [Box 31].
178. D. H. Allen, president, RDC, Memorandum Prepared by Mr. Douglas H. Allen in Response to a Request for Information as to the "Amazon Project" and his Relationship Thereto, January 14, 1944. PUL, RDC, ADR, Box 3, Rubber Development Corp.-Hist-Org, Folder 10, Doc. 6.
179. S. M. McAshan to W. L. Clayton, September 18, 1942; and W. L. C. Clayton, assistant secretary of commerce, to Morris S. Rosenthal, assistant director of the BEW, September 21, 1942. NA, RG 169, Foreign Economic Administration, Board of Economic Warfare, General Counsel, Box 41.
180. See Weinstein, *The Amazon Rubber Boom*.
181. D. H. Allen, president, RDC, Memorandum Prepared by Mr. Douglas H. Allen in Response to a Request for Information as to the "Amazon Project" and his Relationship Thereto, January 14, 1944. PUL, RDC, ADR, Box 3, Folder 10, Doc. 6.
182. T. Ross Cissel Jr. to Douglas H. Allen [herein DHA], Washington, February 27,

1943. NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Country Correspondence File, 1942–45, Brazil, Amazon Vicinity, Box 72.

183. Stanley E. Boyle, "Government Promotion of Monopoly Power: An Examination of the Sale of the Synthetic Rubber Industry," *Journal of Industrial Economics* 9, no. 2 (April 1961), 151–69.
184. Rosenberg, *Spreading the American Dream*, 195.
185. Jones, *Fifty Billion Dollars*, 422–23, 491.
186. Harvey, *Justice, Nature, and the Geography of Difference*, 322.
187. See, for example, David Arnold, *The Problem of Nature: Environment, Culture and European Expansion* (Oxford: Blackwell, 1996); Stepan, *Picturing Tropical Nature*, 36; Kaplan, "'Left Alone with America,'" 14–15.
188. See Smith, *Uneven Development*, 126–31.
189. Samuel I. Rosenman, ed., *The Public Papers and Addresses of Franklin D. Roosevelt* (New York: Harper and Brothers, 1942), 270–73.
190. Sheila McAuliffe to the president of the United States, Los Angeles, June 15, 1942, FDRPL, OF 510, Box 2.
191. "Penny a Pound": The President's Rubber Drive, June 15–July 20, 1942. Conducted by America's Petroleum Industry under the auspices of the Petroleum Industry War Council, May 5, 1943. FDRPL, RSC, Box 18, Correspondence, Memoranda and Clippings Re: Final Report.
192. On the strategies of industrial powers to increase the production and lower the costs of tropical goods, see Daniel R. Headrick, *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940* (New York: Oxford University Press, 1988), 249.
193. Arthur P. Whitaker, *The Western Hemisphere Idea: Its Rise and Decline* (Ithaca, NY: Cornell University Press, 1954), 2, 158–59.

Chapter 3: Rubber's "Soldiers"

1. Weinstein, *The Amazon Rubber Boom*, 14, 27, 157, 178–82; Mauro William Barbosa de Almeida, "The Rubber Tappers of the Upper Juruá River: The Making of a Forest Peasantry," Ph.D. diss., Cambridge University, 1992, 234.
2. Weinstein, "Persistence of Caboclo Culture in the Amazon: The Impact of the Rubber Trade, 1850–1920," in Eugene Philip Parker, ed., *The Amazon Caboclo: Historical and Contemporary Perspectives* (Williamsburg, VA: Department of Anthropology, College of William and Mary, 1985), 93; and B. B. Bliss to Adolf A. Berle Jr., Manaus, August 8, 1945. FDRPL, Berle Papers, Ambassador to Brazil, General Correspondence 1945–56, Box 74.
3. Martinello, *A "batalha da borracha,"* 209.
4. Charles J. Maki and George E. Hafstad, "Report on Rio Juruá-Taraucá Watershed," November 1, 1943. PUL, RDC, ADR, Box 8, Miscellaneous Technicians' Report.
5. Homer G. Pease and Bruce V. Worth, "Report of Pease and Worth for the period of May 11 to June 15, 1942." PUL, RDC, ADR Tech Report Pease and Worth, 6/10.

6. Lima, *Amazônia, a Terra e o Homem*, 63.
7. S. Zink, U.S. Dept. of Commerce, American Republics Unit, "The Economic Assets and Liabilities of the Amazon Valley," May 27, 1942. NA, RG 234, Box 71.
8. See Isabel Cristina Martins Guillen, "A batalha da borracha: Propaganda política e migração nordestina para a Amazônia durante o Estado Novo," *Revista de Sociologia Política* 9 (1997), 95–102.
9. During the Old Republic, labor radicals and public offenders in Brazilian cities were routinely "deported" to the Amazon. See Alexandre Samis, *Clevelândia: anarquismo, sindicalismo e repressão política no Brasil* (São Paulo: Imaginário, 2002); Peter M. Beattie, *The Tribute of Blood: Army, Honor, Race, and Nation in Brazil, 1864–1945* (Durham, NC: Duke University Press, 2001), 147; and Rogério Alicino, *Clevelândia do Norte* (Rio de Janeiro: Biblioteca do Exército, 1971), 91–99. On the image of the Amazon as a death trap for military recruits (as well as earlier efforts to dispel such views), see Todd A. Diacon, *Stringing Together a Nation: Cândido Mariano da Silva Rondon and the Construction of a Modern Brazil, 1906–1930* (Durham, NC: Duke University Press, 2004). On prostitution in Amazonian towns and traffic in women on seringais, see Wolff, *Mulheres da floresta*.
10. Classic "jungle novels" include José Maria Ferreira de Castro's *A selva* (1930), published in English as *Jungle: A Tale of the Amazon Rubber-Tappers*, trans. Charles Duff (New York: Viking, 1935); and José Eustasio Rivera, *La vorágine* (Bogotá: Ministerio de Educación, 1946). On the image of the Amazon as "Green Hell," see Candace Slater, *Entangled Edens: Visions of the Amazon* (Berkeley: University of California Press, 2002), 95–99.
11. See Ruth Brito Lemos Terra, ed., *A literatura de folhetos nos Fundos Villa-Lobos* (São Paulo: Instituto de Estudos Brasileiros, USP, 1981), 9.
12. "Rumo a Amazônia: Terra da Fartura" (1943), AN, Fundo Paulo Assis Ribeiro [herein PAR], Caixa 5, Doc. 40.
13. "Em defesa do programa da borracha," *O Estado*, August 8, 1943.
14. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 1998).
15. See Slater, *Entangled Edens*.
16. Almeida, "The Rubber Tappers of the Upper Juruá River," 228–29.
17. Weinstein, "Persistence of Caboclo Culture in the Amazon," 93.
18. Almeida, "The Rubber Tappers of the Upper Juruá River," 234–35.
19. Weinstein, *The Amazon Rubber Boom*, 16–19.
20. Petey, "Aspectos da economia amazônica," 112–31; and Wolff, *Mulheres da floresta*.
21. Homer G. Pease and Bruce V. Worth, "Report of Pease and Worth for the period of May 11 to June 15, 1942." PUL, RDC, ADR, Tech Report Pease and Worth, 6/10.
22. M. A. Polli to J. A. Russell, "Report on Trip to Rubber Producing Area of the Rios Javary, Itecoai, and Quixito," Manaus, September 1, 1942. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Acre Territory (1944)—Amazonas (Juruá).

23. Petey, "Aspectos da economia amazônica," 112–31.
24. Constant Tastevin, *The Middle Amazon: Its People and Geography*. Eleven Articles by Constant Tastevin, translated by the Strategic Index of the Americas (Washington, 1943), 118.
25. Robert S. Platt, *Latin America: Countrysides and United Regions* (New York: McGraw Hill, 1943), 470–84.
26. M. Barros Ramos, "Seringueiros e Seringalistas," *Boletim da Associação Comercial do Amazonas* 6, no. 67 (February 1947), 15–19; M. Barros Ramos, "Seringueiro e Seringalistas," *Boletim da Associação Comercial do Amazonas* 6, no. 68 (March 1947), 8–10.
27. "Diverge de lugar para lugar e de seringal para seringal . . . ," unsigned document, Manaus, August 15, 1942. NA, RG 234, Box 31.
28. Almeida, "Rubber Tappers of the Upper Juruá River," 172–73; 190–247.
29. See Weinstein, *The Amazon Rubber Boom*, 23–26.
30. Processos Criminais, Guajará-Mirim, Caixa 104, Processo 147/1948, Centro de Documentação Histórica do Tribunal de Justiça de Rondônia [herein CDH-TJR].
31. See the announcement by the Juizado de Direito da Comarca da Xapuri in *O Acre*, June 29, 1941.
32. Cap. Oscar Passos, governor of Acre, to Getúlio Vargas, Rio Branco, May 18, 1942, AN, GCPR, Box 388, Proc. 13253.
33. Processos Civis, Guajará-Mirim, Caixa 43, Processo 025/1945; and Caixa 41, Proc. 052/1943, CDH-TJR.
34. Frederico Machado to J. G. Araújo and Co., Barcellos, February 8, 1941, Museu Amazônico [herein MA], JGA, 1941.
35. Weinstein, *The Amazon Rubber Boom*, 26, 181–89, 244–45.
36. See Michael T. Taussig, *Shamanism, Colonialism, and the Wild Man: A Study in Terror and Healing* (Chicago: University of Chicago Press, 1986); Jordan Goodman, *The Devil and Mr. Casement: One Man's Battle for Human Rights in South America's Heart of Darkness* (New York: Farrar, Straus and Giroux, 2010).
37. Quoted in Wolff, *Mulheres da Floresta*, 200.
38. "A tragédia dos seringais," *Alto Madeira*, March 4, 1943, and March 7, 1943.
39. See, for example, the testimony by Raimundo Nonato da Silva of Acre in Ariadne Araújo, "A saga dos arigós," in *O Povo*, June 21, 1998.
40. Weinstein, *The Amazon Rubber Boom*, 14, 27.
41. Wolff, *Mulheres da Floresta*, 203–06.
42. Processos Criminais, Comarca de Porto Velho, Caixa 104. Proc. 27/1949, CDH-TJR.
43. Processos Civeis, Comarca de Guajará-Mirim, Caixa 016, Proc. 030/1948, CDH-TJR.
44. Processos Criminais, Comarca Guajará Mirim, Caixa 103, Proc. 50/1947, CDH-TJR.
45. "Report on Field Trip on Rios Candeia and Jacy-Paraná by Merl C. Mayer, field technician, May 1943," PUL, RDC, ADR, Box 11, Folder 1 Area and Progress Report.
46. G. R. Trimble Jr. and Milton Aguiar to C. Homer McDuff, "New Area Report on

Central Solimões River (Jutahy River)," MML, RDC, ADR, Box 10, Tech Reports-Trimble and Aguiar.

47. "A tragédia dos seringais," *Alto Madeira*, March 4, 1943 and March 7, 1943. Emphasis in original.
48. "Genêrica do 'Exército da Borracha,'" *Pará-Agrícola XIV*, 168 (January 1946).
49. Otavio Reis, "Regulamento Interno para 1934 e annos a seguir até nova deliberação," reprinted in Benchimol, *Romanceiro da batalha da borracha*, 97–110.
50. Weinstein, *The Amazon Rubber Boom*, 22–25.
51. Letter from Raul Vilhena to J. G. Araújo, Moura, Rio Negro, March 27, 1941. MA, JGA, Manaus, Box 1941.
52. Processos Civeis, Guajará-Mirim, Caixa 41, Processo 052/1943, CDH-TJR.
53. Processos Criminais, Guajará-Mirim, Caixa 102, Proc. 30/1947, CDH-TJR.
54. C. B. Manifold to Henry Linam, August 2, 1943, "Summary of Progress Report on Lower Tapajoz-River, Brazil," August 2, 1943. NA, RG 234, Box 32.
55. Pease and Worth, Território do Acre, Rio Branco, Acre, June 22, 1942, PUL, RDC, ADR, Box 10, Technician Report, Pease and Worth.
56. Memo from Francis C. Rebelo to C. Homer McDuff, Sena Madureira, Acre, June 11, 1945, PUL, RDC, ADR, Box 10, Technician Report Francis C. Rebelo.
57. Eufrozino Gomes de Araújo to J. G. Araújo, Juanico, Rio Juruá, June 6, 1940, MA, JGA, 1940.
58. Francisco de Assis Vasconcellos to J. G. Araújo & Cia., Seringal Tabatinga, August 20, 1945, MA, JGA, 1945.
59. Pedro Mattos, *Trinta dias em águas do Amazonas* (Rio de Janeiro: F. Alves, 1936), 87–88.
60. Charles J. Maki and George E. Hafstad, "Report on Rio Juruá-Taraucá Watershed," November 1, 1943, MML, RDC, ADR, Box 8, Miscellaneous Technicians' Report. For further discussion of gender and consumption, see Heidi Tinsman, "Politics of Gender and Consumption in Authoritarian Chile, 1973–1990: Women Agricultural Workers in the Fruit-Export Industry," *Latin American Research Review* 41, no. 3 (2006), 7–31; and Victoria de Grazia and Ellen Furlough, eds., *The Sex of Things: Gender and Consumption in Historical Perspective* (Berkeley and Los Angeles: University of California Press, 1996).
61. The classic work is Samuel L. Popkin, *The Rational Peasant: The Political Economy of Rural Society in Vietnam* (Berkeley: University of California Press, 1979). For the Amazonian context, see Bradford L. Barham and Oliver T. Coomes, *Prosperity's Promise: The Amazon Rubber Boom and Distorted Economic Development* (Boulder, CO: Westview Press, 1996).
62. Weinstein, *The Amazon Rubber Boom*, 22–25.
63. See Arnold J. Bauer, "Rural Workers in Spanish America: Problems of Peonage and Oppression," *Hispanic American Historical Review* 59. 1 (1979), 34–63; Alan Knight, "Debt Bondage in Latin America," in *Slavery and Other Forms of Unfree Labor*, ed. Léonie Archer (London: Routledge, 1988), 102–17.
64. Neide Esterci, "A dívida que escraviza," in Comissão Pastoral da Terra, ed., *Trabalho escravo no Brasil contemporâneo* (São Paulo: Loyola, 1999), 102–3; José de

Souza Martins, "A escravidão nos dias de hoje e as ciladas da interpretação," in *Trabalho escravo no Brasil contemporâneo*, 157–62.

65. Almeida, "Rubber Tappers of the Upper Juruá," 132–33.
66. Weinstein, *The Amazon Rubber Boom*, 22–25.
67. Processos Civeis, de Guajará Mirim, Caixa 42, Proc. 001/1943, CDH-TJR.
68. Almeida, "Rubber Tappers of the Upper Juruá," 258.
69. Processos Criminais, Guajará-Mirim, Caixa 102, Processo 73/1946, CDH-TJR.
70. Processos Criminais, Guajará-Mirim, Caixa 105, Processo 180/1950, CDH-JTR.
71. Processos Criminais, Guajará-Mirim, Caixa 102, Processo 30/1947, CDH-JTR.
72. Francisco de Assis Vasconcelos to Oswaldo Aranha, Rio Branco, Sept 14, 1931, FGV, CPDOC, Oswaldo Aranha, OA filme 8, 463–64.
73. Processos Criminais, Guajará-Mirim, Caixa 102, Proc. 30/1947, CDH-TJR.
74. Frederico Machado to J. G. Araújo and Co., Barcellos, February 8, 1941, MA, JGA, 1941.
75. Henrique de Oliveira Bastos to José Rodrigues de Oliveira e Agesislao Araújo, Liberdade, November 11, 1943, MA, JGA, 1943.
76. "Seringal Nova Empresa," *O Acre*, May 31, 1942.
77. Wisniewski, *Fraudes no preparo da borracha crua* (Boletim Técnico do Instituto Agronômico do Norte, June 1949), 29.
78. J. G. Araújo & Cia to João de Paula Avelino, Manaus, March 18, 1940, MA, JGA, 1940; J. G. Araújo & Cia. to president of ACA, Manaus, January 15, 1946, ACA, Box 10, Folder 10.3.
79. Almeida, "Rubber Tappers of the Upper Juruá," 172–73, 190–247, 258–59.
80. Homer G. Pease and Bruce V. Worth, "Report of Pease and Worth for the period of May 11 to June 15, 1942." PUL, RDC, ADR, Box 10, Tech Report Pease and Worth, 6/10; Edward McLaughlin to secretary of state, Belém, Pará, June 2, 1043, NA, RG 166, Foreign Agricultural Service, Narrative Reports (1942–45) Brazil: Rubber (Box 92). For a similar complaint by Brazilian officials, see Coordenação de Mobilização Econômica, Gabinete do Coordenador, "Bases para a Elaboração de um programa Amazônico," [n.d.], AN, PAR, Box 4, Doc. 17.
81. LaRue, quoted in Jackson, *The Thief at the End of the World: Rubber, Power, and the Seeds of Empire* (New York: Viking, 2008), 6; the other citation is from Joseph Froude Woodroffe and Harold Hamel Smith, *The Rubber Industry of the Amazon and How Its Supremacy Can Be Maintained* (London: T. Gisher Unwin, 1916), 133.
82. Ignácio Moura and Paulo Eleutherio, *A Amazônia do futuro* (Belém: Livraria Clássica, 1926), 57.
83. Charles I. Faddis to Roosevelt, Washington, March 21, 1942, FDRPL, OF 510, Rubber Industry, Jan.–Sept. 1942, Box 1.
84. Henry Albert Phillips, *Brazil: Bulwark of Inter-American Relations* (New York: Hastings House, 1945), 28–31.
85. R. Sidonio, "O perigo está dentro das fronteiras," *Terra Matura* 2, no. 10 (September 1939), n.p. On government repression against Japanese in the Amazon, see Priscila Ferreira Perazzo, "O confinamento de Acará: japoneses na Colônia de Tomé-Açu no Pará durante a Segunda Guerra Mundial," in Maria Luiza Tucci

Carneiro and Marcia Yumi Takeuchi, eds., *Imigrantes Japoneses no Brasil: Trajetória, Memória e Imaginário* (São Paulo: Edusp, 2010), 185–203.

86. Jefferson Peres, *Evocação de Manaus: como eu a vi ou sonhei* (Manaus: Editora Valer, 2002), 45–51.
87. Felisberto Camargo to Berent Friele, Rio de Janeiro, November 29, 1941, NA, RG 229, Box 1343.
88. Board of Economic Warfare Memorandum: Obstacles to Increased Rubber Production in South and Central America, August 31, 1942, FDRPL, Rubber Survey Committee, 1942, Documents and Reports, Box 10; R. B. Bogardus to Mr. Bicknell, Washington, October 14, 1942, NA, RG 234, Box 31; Coordenação de Mobilização Econômica, Gabinete do Coordenador, "Bases para a Elaboração de um programa Amazônico," [n.d.], AN, PAR, Box 4, Doc. 17.
89. Wagley, "Race Relations in an Amazon Community," in Wagley, ed., *Race and Class in Rural Brazil* (Paris: UNESCO, 1952), 116–18; map entitled "Brazil: Rubber Potential Indian Labor Supply," 1942. NA, RG 234, Box 33.
90. C. B. Manifold to R. B. Bogardus, Washington, July 26, 1943. NA, RG 234, Box 63.
91. João Batista Chuva, inspetor do SPI, to Coronel Magalhães Barata, Itaituba, September 17, 1943; and Frei Alberto Cruse to interventor federal, Santarém, September 18, 1943, Arquivo Público do Estado do Pará (herein APEP), Secretaria de Governo, Telegramas, 2494 (1943).
92. C. J. Alexopoulos, field technician, to E. B. Hamill, "Increase of Rubber Production for War Needs in the Benjamin Constant Area," Benjamin Constant, June 28, 1943, PUL, RDC, ADR, Box 11. Progress and New Areas Reports 8/12.
93. Ernest E. Maes, field representative of the United States Department of the Interior, National Indian Institute, "Brazilian Indian Labor and Indian Administration in Relation to the Rubber Collection Program," June 1942, NA, RG 229, Box 1683.
94. Wagley, "Race Relations in an Amazon Community," 116–28. Maes was undoubtedly influenced by U.S. classifications. See Eva Marie Garroutte, "The Racial Formation of American Indians," *American Indian Quarterly* 25, no. 2 (spring 2001), 230–31.
95. In this vein, geographer Platt had referred to Perpétuo Socorro's residents as "of Indian blood but [who] consider themselves Brazilian." Platt, *Latin America*, 477–84.
96. Histórico de Dezembro de 1942 a 10 de Fevereiro de 1943, AN, PAR, Caixa 5, Doc. 62.
97. "A marcha para os seringais," *A Noite*, January 18, 1943.
98. Paulo Assis Ribeiro, head of SEMTA, would later affirm that the cariocas were "adventurous types," deserters, and freeloaders. The indictment, a common wartime and postwar refrain, harped on the image of urban riff-raff averse to physical exertion in the seringais. See Assis Ribeiro's testimony in *Diário da Assembléia* (August 24, 1946), which is included in his archival collection. AN, PAR, Box 5, Doc. 64.
99. Faustino Nascimento, "O quinquênio do Estado Novo e o Esforço de Guerra

no Brasil," in Ministério da Agricultura, Serviço de Documentação, *Marcha para o Oeste (Conferências Culturais*), Volume 1 (Rio de Janeiro: Ministério de Agricultura, 1946), 286.

100. Quoted in Durval Muniz Albuquerque Júnior, *Nordestino: uma invenção do falo: uma história do gênero masculino (Nordeste, 1920/1940)* (Maceió: Catavento, 173.
101. Péricles Melo Carvalho, "A legislação imigratória do Brasil e sua evolução," *Revista de Imigração e Colonização* 1, no. 4 (Oct. 1940), 735. Amazonian historians asserted that the mixed-blood nordestino migrant did not "perturb" the process of ethnic formation in the Amazon, since the migrants were "*mestiços* just like the *caboclos* they encountered." Arthur Cezar Ferreira Reis, *O seringal e o seringueiro* (Rio de Janeiro: Ministério da Agricultura, Serviço de Informação Agrícola, 1953), 41.
102. Felisberto Camargo to Berent Friele, Rio de Janeiro, November 29, 1941, NA, RG 229, Box 1343.
103. Pe. Helder Câmara to D. Aloísio Masella, D. D. Núncio Apostólico, Rio de Janeiro, Jan. 28, 1943, AN, PAR, box 4, Doc. 7.
104. Moacir Paixão e Silva, "Cidade e hinterlândia: Zoneamento de povoadores da Amazônia," in *Boletim Geográfico* 2, no. 18 (September 1944): 846.
105. On gender ideologies and relations in the forest, see *Interventoria Federal no Estado do Amazonas, Exposição ao Exmo. Sr. Dr. Getúlio Vargas, Presidente da Repúblic, por Álvaro Maia, Interventor Federal, maio 1942–maio 1943* (Manaus: DEIP, 1943), 79–80; Wolff, *Mulheres da floresta*, 74–75; Lima, *Amazônia, a Terra e o Homem*, 147–78; Reis, *O seringal e o seringueiro*, 122–23; Oricema Levy Rabello, *Minha vida no seringal* (Manaus: Prograf, 1996); Ferreira de Castro, *A Selva*.
106. "Economic Mobilisation and Man-Power Problems in Brazil," *International Labour Review* 47 (Jan-June 1943): 724; D. H. Allen to Huntington Morse, asst. to the chairman, Maritime Commission, August 5, 1943, NA, RG 234, Box 32.
107. Dr. G. M. Saunders to Dr. G. C. Dunham, "Labor Immigration," June 26, 1942, and Charles Wagley to Dr. George M. Saunders, "Labor Immigration," NA, RG 229, Box 1334; D. H. Allen to Huntington Morse, August 5, 1943.
108. "Recrutamento," AN, PAR, Caixa 5, Doc. 42.
109. "Economic Mobilisation and Man-Power," 724.
110. "O que é o Serviço Especial de Mobilização de Trabalhadores para a Amazônia," *A Manhã* (Rio de Janeiro), April 7, 1943.
111. There is an extensive multinational literature on the role of gender ideologies in World War II. See Margaret Randolph Higgonet et al., *Behind the Lines: Gender and the Two World Wars* (New Haven, CT: Yale University Press, 1987); Maureen Honey, *Creating Rosie the Riveter: Class, Gender, and Propaganda during World War II* (Amherst: University of Massachusetts Press, 1984); Sonya O. Rose, "Temperate Heroes: Concepts of Masculinity in Second World War Britain," in *Masculinities in Politics and War: Gendering Modern History*, ed. Stefan Dudink, Karen Hagemann, and John Tosh (Manchester, UK: Manchester University Press, 2004), 177–95. For Brazil, see Beattie, *The Tribute of Blood*; Roney Cytrynowicz, *Guerra sem guerra: A mobilização e o cotidiano em São Paulo durante*

a Segunda Guerra Mundial (São Paulo: Geração / Editora da Univ. de São Paulo, 2000); and Barbara Weinstein, "Making Workers Masculine: The (Re)Construction of Male Worker Identity in Twentieth-Century Brazil," in Dudink, Hagemann, and Tosh, eds., *Masculinities in Politics and War*, 276–94.

112. See Lucia Arrais Morales, *Vai e vem, vira e volta: Rotas dos Soldados da Borracha* (São Paulo: Annablume, 2002).
113. Thomaz Pompeu Sobrinho, "O homem do nordeste," *Boletim da IFOCS* 2, no. 1 (July 1934), 34.
114. Renato Carneiro Campos, *Ideologia dos poetas populares do nordeste* (Recife: Instituto Nacional de Estudos Pedagógicos, 1959), 62–63.
115. Poetry of Raimundo Nonato is reprinted in Araújo, "A saga dos arigós."
116. Lima is quoted in Leda Gonçalves, "Propaganda do SEMTA seduzia e encantava," *Diário do Nordeste*, March 21, 2004.
117. Almeida, "Rubber Tappers of the Upper Juruá," 239.
118. "A emigração dos cearenses," *Correio da Semana*, May 7, 1943.
119. "Floriano era um sujeito decidido," NA, RG 229, Coordination Committee for Brazil, General Records (E–99) 05.1, Box 1282.
120. "Continua palpitante o interesse pela correspondência dos soldados da borracha," *Correio da Semana*, June 11, 1943; "Correspondência de trabalhadores do SEMTA," *Correio da Semana*, March 26, 1943.
121. "O SEMTA facilita ao proletariado cearense elevar o nível do seu padrão de vida," *Correio da Semana*, April 25, 1943.
122. "Os cuidados do SESP na seleção de homens para a Batalha da Borracha," *O Jornal*, August 18, 1943; "Preservando a saúde dos 'soldados da borracha,'" *Folha da Noite* (São Paulo), September 8, 1943.
123. "No pouso do SEMTA, quadra de esporte mais original do estado," *Cancha* (Fortaleza) 3, 31 (May 1943), AN, PAR, Caixa 4, Doc. 23. On physical exercise and the nordestino migrants, see Ariza Maria Rocha Lima, "A seca, o sertanejo e a ginástica sueca na II batalha da borracha," in Maria Juraci Maia Cavalcante, ed., *História e memória da educação no Ceará* (Fortaleza: Imprensa Universitária, 2002), 147–64.
124. "Viaja uma senhorita," *O Unitário*, April 5, 1943.
125. "Continua palpitante o interesse pela correspondência dos soldados da borracha," *Correio da Semana*, June 11, 1943.
126. "Ganhou dinheiro na Amazônia," *O Estado*, October 26, 1944.
127. Departamento de Imprensa e Propaganda, "Borracha e mais borracha," reprinted in *O Acre*, June 6, 1943.
128. "Rumo à Amazônia: Terra da fartura," AN, PAR, Caixa 5, Doc. 40.
129. Silveira Brasil, "Marchemos para a Amazônia," *O Unitário*, February 7, 1943.
130. Álvaro Maia, "Decálogo do Seringueiro," *Alto Madeira*, September 26, 1943.
131. "O que é o Serviço Especial de Mobilização de Trabalhadores para a Amazônia," *A Manhã* [Rio de Janeiro], April 7, 1943.
132. "Os cuidados do SESP na seleção de homens para a Batalha da Borracha," *O Jornal*, August 18, 1943.

133. Peter Paret, quoted in Miguel Angel Centeno, *Blood and Debt: War and the Nation-State in Latin America* (University Park: Pennsylvania State University Press, 2002), 243n29.
134. John Simmons, counselor of embassy, to sec. of state, RJ, February 2, 1943. NA, RG 234, Box 34.
135. See Joan Wallach Scott, *Gender and the Politics of History* (New York: Columbia University Press, 1999).
136. "A população do Ceará," *Correio da Semana*, March 26, 1943; "O alistamento de homens casados para a Amazônia," *Correio da Semana*, May 21, 1943.
137. Carlos José de Assis Ribeiro to Arthur Hehl Neiva ("Relato confidencial de observações feitas no Norte, junto ao SEMTA"), April 8, 1943, AN, PAR, Box 4, Doc. 17.
138. Routing Contract, Special Service of Mobilization of Workers for Amazonia, NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil: Amazon Vicinity, Box 72; "Esboço de Programa para Assistência a Família dos Trabalhadores Mobilizados," AN, PAR, Box 5, Doc. 56; "O que é o Serviço Especial." See also Secreto, *Soldados da borracha: Trabalhadores entre o Sertão e a Amazônia no Governo Vargas* (São Paulo: Fundação Perseu Abramo, 2007).
139. Centeno, *Blood and Debt*, 217–18; 241–42.
140. See Beattie, *The Tribute of Blood*.
141. See Lenharo, *Colonização e trabalho no Brasil*; Martinello, *A "batalha da borracha."*
142. On the problem of law enforcement in the contemporary Amazon, see Kathryn Hochstetler and Margaret E. Keck, *Greening Brazil: Environmental Activism in State and Society* (Durham, NC: Duke University Press, 2007), 151–54.
143. By 1940, seringalistas typically leased rather than owned rubber-producing properties, although they continued to pay for the advances in goods from the larger commercial firms in forest products at considerable rates of interest. See, for example, the account of Mouzinha Leite Lima, Cruzeiro do Sul, Rio Juruá, October 8, 1941, MA, JGA, 1941.
144. English translation of "Contract" as Enclosure No. 2 to Despatch No. 183 of March 13, 1943 from American Consulate, Pará, Brazil. NA, RG 234, Box 56.
145. Henrique Dória de Vasconcelos, "Viagem de inspeção ao norte," *Revista de Imigração e Colonizacão* 3, no. 2 (August 1942), 114–19.
146. "Encaminhamento de trabalhadores nordestinos para a Amazônia," *Revista de Imigração e Colonização* 2, no. 2 (August 1942), 9–15; Francisco das Chagas Leopoldo de Menezes, "Instruções para a execução do Decreto-lei, No. . . . de . . . de . . . 1941," a bordo *Índio do Brasil*, February 25, 1941, ACA, Box 3, Folder 3.2; *Relatório da Diretoria da ACA, Ano Social de 1940* (Manaus, 1941), 85–87.
147. *Relatório da Diretoria da ACA, Ano Social de 1940* (Manaus, 1941), 132–33, 137.
148. Menezes, "Instruções para a execução do Decreto-lei, No. . . . de . . . de . . . 1941."
149. *Boletim da Associação Comercial do Amazonas* 1, no. 2 (June 1942), 8.
150. M. Barros Ramos, "Seringueiro e seringalistas," *Boletim da Associação Comercial do Amazonas* 6, no. 67 (February 1947), 15–19 and continued in *Boletim da Asso-*

ciação Comercial do Amazonas 6, no. 68 (March 1947), 8–10; *Relatório da Diretoria da* ACA, *Ano Social de 1940* (Manaus, 1941), 83–87, 132.

151. Lenharo, *Colonização e trabalho no Brasil*, 80–81; Vania Porto Tavares, Cláudio Monteiro Considera, and Maria Thereza L. L. de Castro e Silva, *Colonização Dirigida no Brasil: Suas Possibilidades na Região Amazônica*, 2nd Edition (Rio de Janeiro: IPEA/INPES, 1979), 19–25; Welch, *The Seed Was Planted*, 76–78.
152. Carvalho, *O problema da borracha*, 6–8.
153. See "Transporte gratúito para os seringueiros," *O Jornal* [Rio de Janeiro], May 28, 1942; and "Localização de trabalhadores nacionais, destinados aos seringais do Amazonas e do Acre," *Jornal do Brasil*, May 28, 1942; "Como organizar os seringueiros," *Cultura Política* 2, no. 19 (September 1942), 243–45.
154. Cliff Welch, *The Seed Was Planted*, 57–58.
155. Andrew Revkin, *The Burning Season: The Murder of Chico Mendes and the Fight for the Rain Forest* (Boston: Houghton Mifflin, 1990), 83–97.
156. R. Paula Lopes, "Social Problems and Legislation in Brazil," *International Labour Review* 44, no. 5 (November 1941), 531.
157. See Angela de Castro Gomes, *A invenção do trabalhismo* (Rio de Janeiro: Relume Dumará, 1994); Jorge Ferreira, *Trabalhadores do Brasil: O imaginário popular, 1930–45* (Rio de Janeiro: Fundação Getúlio Vargas, 1997); John D. French, *The Brazilian Workers' ABC: Class Conflict and Alliance in Modern São Paulo* (Chapel Hill: University of North Carolina Press, 1992); Brodwyn Fischer, *A Poverty of Rights: Citizenship and Inequality in Twentieth-Century Rio de Janeiro* (Palo Alto, CA: Stanford University Press, 2008).
158. See Susan K. Besse, *Restructuring Patriarchy: The Modernization of Gender Inequality in Brazil, 1914–1940* (Chapel Hill: University of North Carolina Press, 1996); Barbara Weinstein, *For Social Peace in Brazil: Industrialists and the Remaking of the Working Class in São Paulo, 1920–1964* (Chapel Hill: University of North Carolina Press, 1996); and Barbara Weinstein, "Making Workers Masculine: The (Re)Construction of Male Worker Identity in Twentieth Century Brazil," in *Masculinities in Politics and War*, 276–94.
159. Faustino Nascimento, "O quinquênio do Estado Novo e o esforço de guerra no Brasil," in Ministério da Agricultura, Serviço de Documentação, *Marcha para o Oeste (Conferências Culturais)*, vol. 1 (Rio de Janeiro: Ministério de Agricultura, 1946), 286.
160. Quoted in Roberto Ribeiro Correa, "BASA: Seis décadas de mudança institucional," in Armando Dias Mendes, ed., *Amazônia: Terra e Civilização*, vol. 2 (Belém: BASA, 2004), 556.
161. For Brazilian intellectuals' romance with the *sertão* and the *sertanejo* as locus of Brazilian authenticity, see Nísia Trindade Lima, *Um sertão chamado Brasil: intelectuais e representação geográfica da identidade nacional* (Rio de Janeiro: Revan; IUPERJ, UCAM, 1999).
162. John W. Bicknell, vice president, Rubber Reserve Company, to D. H. Allen, special assistant to the president, Rubber Reserve Company, Washington, January 13, 1943; Leonard H. Heller, chief, Rubber Division, Board of Economic Warfare,

to John W. Bicknell, Washington, January 12, 1943. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil-Miscellaneous, Box 72.

163. Leonard H. Heller to Douglas Allen, December 9, 1942. NA, RG 169, Box 41. See also R. J. Levy to D. H. Allen, October 3, 1942, John W. Bicknell, vice president, Rubber Reserve Company, to D. H. Allen, special assistant to the president, Rubber Reserve Company, Washington, January 13, 1943; Leonard H. Heller, chief, Rubber Division, Board of Economic Warfare to John W. Bicknell, Washington, January 12, 1943, NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil: Miscellaneous.
164. "Memorandum of Understanding," n.d. NA, RG 169, Box 6; Harold W. Starr to Monroe Oppenheimer, Washington, DC, September 15, 1942, NA, RG 169, Box 39.
165. Leonard H. Heller to Douglas Allen, December 9, 1942.
166. Arthur Paul, chief of office, to John Worcester, n.d.; "Use of Labor Clauses in U.S. Contracts for Procurement of Strategic Materials," spring 1943, NA, RG 169, Box 6.
167. Harold E. Gustin to B.V. Worth, Manaus, September 4, 1942, PUL, RDC, ADR, Box 3, Rubber Tapping and Production Methods 11/6–7; Marcos Carvalho Pereira, "A Guerra na Amazônia," *O Diário de um Soldado da Borracha* (unpublished manuscript), 49.
168. Const. J. Alexopoulos and H. Caldeira Filho, Special Report no. 1: The Seringaes of Raymundo Bessaa on the River Javary, Benjamin Constant, January 23, 1944, PUL, RDC, ADR, Box 5, Technician reports 5/2.
169. E. B. Hamill to all technicians, "Excerpt from a memorandum of Field Technician Becker on the Muaná District," Manaus, October 11, 1943, PUL, RDC, ADR, Box 8, Tech Reports 4/8.
170. Const. J. Alexopoulos and H. Caldeira Filho, Special Report no. 1.
171. W. E. Klippert, "Full Spiral Fourth-Day Tapping of Hevea Rubber and Its Advantages in the Present Emergency," Rio de Janeiro, April 20, 1943. PUL, RDC, ADR, Rubber Tapping and Production Methods, 11/3.
172. "Corte de Seringueira," n.d., PUL, RDC, ADR, Box 8, Technician Reports 5/3; Harold E. Gustin to B. V. Worth, Manaus, September 4, 1942, PUL, RDC, ADR, Box 3, Rubber Tapping and Production Methods, 11/6–7.
173. "Corte de Seringueira."
174. On American rubber plantations in Southeast Asia, see Tucker, *Insatiable Appetite*, 226–82; C. B. Manifold, head field technician, to all field technicians of Amazon Valley, September 9, 1942, PUL, RDC, ADR, Box 3, Rubber Tapping and Production Methods.
175. See José Augusto Pádua, "Natureza e Projeto Nacional: As Origens da Ecologia Política no Brasil," in José Augusto Pádua, ed., *Ecologia e Política no Brasil* (Rio de Janeiro: Espaço e Tempo/IUERJ, 1987)," 39; Reis, *O Seringal e o seringueiro*, 57.
176. Environmental Law Institute, *Brazil's Extractive Reserves: Fundamental Aspects of Their Implementation* (1992), 7. While extractivism can range from collection to annihilation, rubber tapping of Hevea has been more typically defined in the

contemporary literature as the former. See Allegretti, "The Amazon and Extracting Activities," in Miguel Clüsener Godt and Ignacy Sachs, eds., *Brazilian Perspectives on Sustainable Development of the Amazon Region* (Paris: UNESCO, 1995), 158–62.

177. Milo Perkins, executive director, to Nelson A. Rockefeller, coordinator of Inter-American affairs, May 28, 1942. NA, RG 169, Box 41.
178. Edward D. McLaughlin, American consul, to secretary of state, Pará, June 2, 1943, NA, RG 234, Box 56.
179. CIAA Propaganda Analysis, February 25, 1943 (Report on Axis and Latin American Reactions to Inter-American Economic Relations). RAC, Rockefeller Family RG 4, Washington DC Files, CIAA Bound Volumes, Weekly Review of Axis Broadcasts, 1942–44.
180. See, for example, Jane D. Semeão e Silva, "Comportamento feminino em Fortaleza: Entre o Tradicional e o Moderno durante a 2a Guerra Mundial (1939–1945)," in Simone de Souza and Frederico de Castro Neves, eds., *Gênero: Fortaleza, História e Cotidiano* (Fortaleza: Demócrito Rocha, 2002), 17–52.
181. E. P. Keeler to secretary of state, Rio de Janeiro, April 23, 1943, NA, RG 166, Box 92; memo to Mr. Bonsal, March 18, 1943, FDRPL, Sumner Welles Papers, Office Correspondence 1920–1943, Box 87, Folder 6.
182. D. H. Allen to Mr. Herbert et al., Agreement between Rubber Reserve Company and SEMTA for the recruitment and movement of labor from other parts of Brazil to the Amazon, NA, RG 234, Records of RFC, Rubber Development Corporation, Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72.
183. Brazilian Division to the coordinator, RJ, March 16, 1942, "Brazilian Opinion of Coordinator's Office," NA, RG 229, Box 1333.
184. See J. J. Swain to W. C. Beck, Manaus, April 11, 1944; Report of Paulo Marinho, Chefe de Polícia de Manaus, December 20, 1944; Philip H. Williams, undated report in PUL, RDC, ADR, Box 1, Folders 23, 27, and 28, respectively.
185. Antonio Pedro Tota, *O imperialismo sedutor: a americanização do Brasil na época da Segunda Guerra* (São Paulo: Companhia das Letras, 2000); Moura, *Tio Sam chega ao Brasil*.
186. See Maria Helena Capelato, *Multidões em cena: propaganda política no varguismo e no peronismo* (Campinas: Papirus, 1998). On radio under Vargas, see McCann, *Hello, Hello Brazil*; on film, see Anita Simis, *Estado e cinema no Brasil* (São Paulo: Annablume; FAPESP, 1996).
187. See Rosenberg, *Spreading the American Dream*, 207–8; and Office of Inter-American Affairs, *History of the Office of the Coordinator of Inter-American Affairs* (Washington, DC: U.S. Government Printing Office, 1947). For a description of the archival collection, see Gisela Cramer and Ursula Prutsch, "Nelson A. Rockefeller's Office of Inter-American Affairs (1940–1946) and Record Group 229," *Hispanic American Historical Review* 86, no. 4 (2006): 785–806.
188. Moura, *Tio Sam chega ao Brasil*, 36–43; Text of Publicity Telegram to Be Sent by Rubber Reserve and by Coordinator of Inter-American Affairs to Their Respective Representatives in Rio, n.d., RG 229, Box 1282.

189. On the *Amazon Awakens*, see Barbara Weinstein, "Tropical Modernity: North American Visions of the Amazon on the Eve of the Cold War," *Revista do Instituto de Estudos Brasileiros* 45 (2007), 153–76.
190. Office of the Co-ordinator of Inter-American Affairs, *Brazil at War*, 1943; Francis Alstock, director, Motion Picture Division, CIAA to Berent Friele, Director, Brazilian Division, CIAA, January 19, 1943. NA, RG 229, Box 1295. See also "War Taps Brazil's Wild Rubber," *Life*, May 24, 1943.
191. Mrs. M. V. Thayer to Mr. Allen, December 21, 1943, NA, RG 234-G, Records of the Reconstruction Finance Corporation Prints: General Photographs of the Rubber Development Corporation, 1943–1944, Box 1.
192. William W. Murray to Francis Alstock, January 19, 1943, NA, RG 229, Office of Inter-American Affairs, Box 1295; Mr. Hippelheuser telephoned Mr. Friele on March 3, 1943, at 5:15 p.m; Text of Publicity Telegram to Be Sent by Rubber Reserve and by Coordinator of Inter-American Affairs to Their Respective Representatives in Rio, n.d.; memo from the Brazilian Division to the coordinator, attention of Mr. Alstock, August 27, 1943. NA, RG 229, Box 1282. See also Jean Manzon, *Flagrantes do Brasil* (Rio de Janeiro: Bloch, n.d.); and Moura, *Tio Sam*, 42–43.
193. Text of Publicity Telegram to Be Sent by Rubber Reserve and by Coordinator of Inter-American Affairs to Their Respective Representatives in Rio, n.d., NA, RG 229, Box 1282.
194. Collection of posters promoting wartime rubber tapping by OIAA are in NA, RG 229, Boxes 1282 and 1283.
195. B. O. Clifton-Riley, asst. manager, Production Dept. to RDC, Rio de Janeiro, July 24, 1943, and August 25, 1943, NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72.
196. Marcelo Gomes, director, *Cinema, Aspirinas, Urubus*, 2005.
197. "SEMTA: Recrutamento de Mossoró-Instruções de Serviço," n.d. AN, PAR, Box 5, Doc. 55.
198. Lauro de Oliveira Lima, *Na Ribeira do Rio das Onças (Limoeiro do Norte)* (Fortaleza: Assis Almeida, 1997), 489.
199. Hugo Forman, Report from Trip to North-Eastern Division, Rio de Janeiro, August 3, 1943. NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Fortaleza District.
200. Luiz Eugênio Nogueira, *O rádio no país das amazonas* (Manaus: Editora Valer, 1999), 28–28, 76–86. "Brasileiros!: Produzir Borracha é uma obra patriótica," *Gazeta de Notícias*, July 9, 1943.
201. Mabel Gustin, Report on Showings of 16mm Films on the Solimões River, 1944; Mabel Gustin, Report on 16mm Film Showings in Baixo Amazonas, n.d., NA, RG 229, Box 1293.
202. See Marshall McLuhan, *Understanding Media: The Extensions of Man* (London: Routledge, 2001).

203. See C. J. de Assis Ribeiro, Plano de Colaboração Geral com o Serviço Especial de Trabalhadores para a Amazônia, Rio de Janeiro, April 24, 1943, AN, PAR, Caixa 4, Doc. 18; and Carlos José de Assis Ribeiro to Arthur Hehl Neiva, April 8, 1943, Relato Confidencial de Observações feitas no Norte, junto ao SEMTA, AN, PAR, Caixa 4, Doc. 17.
204. See, for example, Lustosa da Costa, *Clero, Nobreza e Povo de Sobral*, 2d edition (Rio-São Paulo-Fortaleza: ABC Editora, 2004); Neves, *A multidão e a história*, 136–37.
205. Antônio de Almeida Lustosa, *Carta Pastoral sobre a Seca de 1942* (Fortaleza, 1943).
206. Histórico de Dezembro de 1942 a 10 de Fevereiro de 1943, AN, PAR, Caixa 5, Doc. 62.
207. Pe. Helder Câmara to D. Aloísio Masella, D. D. Núncio Apostólico, Rio de Janeiro, January 28, 1943, AN, PAR, Caixa 4, Doc. 7.
208. See, for example, "O SEMTA facilita ao proletariado cearense elevar o nível do seu padrão de vida," *Correio da Semana*, April 25, 1943; "A grande batalha da borracha," *Correio da Semana*, March 12, 1943; "Carta de um soldado da borracha," which appeared in identical form in *O Estado* and *Correio da Semana*, April 30, 1943, as well as "Os cearenses e o vale do Rio-Mar," which appeared in the same two newspapers on April 20 and April 25, 1943, respectively; "A exploração da Amazônia," *O Nordeste*, April 3, 1943.
209. "Cerimônias religiosas realizadas pelo SEMTA no Núcleo de Porangabussu," *O Nordeste*, April 5, 1943; "Missa Campal," *Correio da Semana*, March 5, 1943; "Espontânea colaboração do povo de Sobral ao SEMTA," *O Estado*, May 15, 1943.
210. See testimonies in Lima, *Na Ribeira do Rio da Onças*, 429.
211. Hubert Maness, American vice consul, to Jefferson Caffery, American ambassador to Brazil, Manaus, January 9, 1943, NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Country Correspondence File, 1942–45 Brazil, Rio Vicinity, Box 72.
212. William W. Murray to Francis Alstock, January 19, 1943; William W. Murray to Carl Sylvester, July 16, 1943, NA, RG 229, Box 1295. Memo from the Brazilian Division to the coordinator, attention of Mr. Alstock, August 27, 1943, NA, RG 229, Box 1282.
213. William W. Murray, director, Motion Picture Section, CIAA, to Carl A. Sylvester, director, Rio Division, RDC, November 16, 1943. NA, RG 229, Box 1282.
214. William W. Murray to Carl Sylvester, July 16, 1943. NA, RG 229, Box 1295; C. B. Manifold to Edward H. Weiss, July 20, 1943. NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Country Correspondence File, 1942–45 Brazil, Rio Vicinity.
215. Mabel Gustin, Report on Showings of 16mm Films on the Solimões River, 1944; Mabel Gustin, Report on 16mm Film Showings in Baixo Amazonas, n.d., NA, RG 229, Box 1293.
216. Constantino J. Alexopoulos and Herculano Caldeira Filho, The Rio Curuça in the Municipality of Benjamin Constant, Report No. 4, October 22, 1943, PUL, RDC, ADR, Box 9, Technician Reports-Alexopoulos; Marcos Pereira, Progress Report

on Rio Xapuri Area, 1945, PUL, RDC, ADR, Box 10, Tech. Reports-Marcos Pereira; Progress Report No. 1 Alto Rio Purus in Amazonas and Acre Territory Brazil by Frederick H. Vogel, Associate Field Technician, Sena Madureira Acre, July 3, 1944, PUL, RDC, ADR, Box 10, Folder Technician Report Vogel; New Area Report on Lower Middle Amazon (Municipalities of Prainha and Monte Alegre) by Moacyr B. de Mello, April 5–14, 1944, PUL, RDC, ADR, Box 9, Folder Technicians Reports; Mabel Gustin to Forrest N. Daggett, American Vice Consul, Manaus, Nov. 25, 1944, NA, RG 229, Box 1277.

217. "New Area Report on the Upper Rio Juruá by Field Technician George E Hafstad and Assistant Field Technician Paulo de Macedo" (The survey was conducted between August 21, 1944 and January 18, 1945). PUL, RDC, ADR, Box 9, Folder Technician Report Hafstad and Macedo.
218. Mabel Gustin, Report on Showings of 16mm Films on the Solimões River; Mabel Gustin, Report on 16mm Film Showings in Baixo Amazonas.
219. See, for example, Erasmo Gamboa, *Mexican Labor and World War II: Braceros in the Pacific Northwest, 1942–1947* (Austin: University of Texas Press, 1990); Honey, *Rosie the Riveter*.
220. "Rio Negro Diary or Twelve Rivers in Nine Weeks by Harold E. Gustin," [1944?], PUL, RDC, ADR, Box 12, Folder 4, "Rio Negro Diary by Harold E. Gustin."
221. Weinstein, *The Amazon Rubber Boom*, 14, 27, 157.
222. C. A. Sylvester, director, Rio Division to J. W. Bicknell, vice-president, RDC, April 14, 1943. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil: Rio Vicinity.
223. "A parada da borracha," *Gazeta de Notícias*, July 2, 1943.
224. J. de Magalhães Barata to Vargas, July 27, 1943, APEP, Secretaria do Governo, Telegramas, 2497.
225. "Junho, Mês Nacional da Borracha," *Boletim da* ACA, 2, no. 23 (June 1943), 8; *Relatório da Diretoria da* ACA, Ano social de 1943 (Rio de Janeiro: Imprensa Nacional, 1944), 91.
226. C.A. Sylvester, Director, Rio Division to J. W. Bicknell, Vice-President, RDC, April 14, 1943, NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country, Correspondence File, 1942–45, Brazil-Rio Vicinity, Box 72; and Almir de Andrade, *Contribuição à História Administrativa do Brasil*, 60–62.
227. Reynaldo Reis, "Pode o Brasil produzir mais borracha?," 38–42, article from an unidentified publication found in PUL, RDC, ADR, Box 3—Rubber Miscellaneous Data; Almeida, "The Rubber Tappers of the Upper Juruá River," 230.
228. Lopes, "Social Problems and Legislation in Brazil," 531; "Economic Mobilisation and Man-Power Problems," 725.
229. Pereira, *A guerra na Amazônia*, 49; C. B. Manifold, head field technician, to all field technicians of Amazon Valley, September 9, 1942. PUL, RDC, ADR, Box 3, Rubber Tapping and Production Methods; W. E. Klippert, "Notes on Procurement of Wild Rubber in Latin America," March 22, 1943. NA, RG 234, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil-General-

South Brazil; S. V. Sihvonen, H. C. Haines, and M. C. Pereira, "Report on Rio Abunã Field Trip, March 31 to May 19, 1943," June 4, 1943. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Reports Relating to Rubber Development in Latin America, 1942–45. Brazil: South Brazil—Acre Territory (1942–43); "New Area Report on Upper Solimões Region: Rio Itecoarí and Affluents-Rio Branco and Rio das Pedras" by Constantine J. Alexopoulos, field technician, and Herculano Caldeira Filho. March 25, 1944. PUL, RDC, ADR, Box 9, Folder Technicians Report ALEXOPOULOS HERCULANO CALDEIRA FILHO.

230. See Lenharo, *Colonização e trabalho*; Morales, *Vai e vem*; Martinello, *A "batalha da borracha."*
231. See Cytrynowicz, *Guerra sem guerra*.

Chapter 4: The Environment of Northeastern Migration to the Amazon

1. See Martinello, *A "batalha da borracha."*
2. *Relatório da Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia* (December 1945).
3. The statistics are from a speech by Álvaro Maia denouncing accusations of atrocities during the rubber campaign that is reprinted in *Boletim da* ACA, 7, 74 (Sept. 1947).
4. *Anais da Assembléia Constituinte*, vol. 17, sess. 98, 292, 331–54; see also Levine, *Father of the Poor?*, 70n48.
5. Villa, *Vida e morte no sertão*, 162. For similar interpretations, see also Dean, *Brazil and the Struggle for Rubber*; Lenharo, *Colonização e trabalho no Brasil*; Martinello, *A "batalha da borracha."*
6. Larry Rohter, "Of Rubber and Blood in Brazilian Amazon," *New York Times*, November 23, 2006.
7. See, for example, the documentary film by Wolney Oliveira, *Borracha para Vitória* (2004), and the report on the rubber campaign by Ariadne Araújo, "A saga dos arigós" in *O Povo*, June 21, 1998.
8. See Moya, *Cousins and Strangers: Spanish Immigrants in Buenos Aires, 1850–1930* (Berkeley: University of California Press, 1998), 21, 80.
9. Antonio Bezerra, *O Ceará e os cearenses* (Fortaleza: Fundação Waldemar Alcântara, 2001 [1906]), 1–2, 36–41; Souza Pinto, "Geographia Econômica do Ceará: as Seccas de 1931 a 1933," *Revista do Instituto do Ceará*, 52 (1938): 17–34.
10. Eidorfe Moreira cites authors such as Gilberto Freyre, Cassiano Ricardo, and Viana Moog for advancing this thesis. See Moreira, *Influências amazônicas no Nordeste* (*reflexos da fase áurea da borracha*) (Belém: UFPa/NAEA, 1982), 44.
11. Gonçalves Fernandes, *Mobilidade, Caráter e Região* (Recife: Instituto Joaquim Nabuco de Pesquisas Sociais, 1959), 23–26.
12. For the traditional depiction, see Mario Martins de Freitas, "A mística e as realizações do Estado Nacional," in *Cultura Política* 2, 19 (September 1942): 104–5. For revisionist approaches, see Isabel Cristina Martins Guillen, *Errantes da selva: histórias da migração nordestina para a Amazônia* (Recife: Editora Universitária

UFPE, 2006); Secreto, *Soldados da borracha*; and Marilda Aparecida de Menezes, "Migration Patterns of Paraíba Peasants," *Latin American Perspectives* 31, 2 (March 2004): 112–34.

13. Durval Muniz de Albuquerque Júnior, "Weaving Tradition: The Invention of the Brazilian Northeast," *Latin American Perspectives* 31, 2 (March 2004): 58.
14. See Da Cunha, *À margem da história*.
15. Santos, *História econômica da Amazônia*, 99–100. See also Douglas H. Graham and Sergio Buarque de Holanda Filho, *Migration, Regional and Urban Growth and Development in Brazil: A Selective Analysis of the Historical Record, 1872–1970* (Instituto de Pesquisas Econômicos-USP, 1971).
16. Samuel Benchimol, *O cearense na Amazônia: Inquérito antropogeográfico sobre um tipo de imigrant*e, 2nd edition (Rio de Janeiro: SPVEA, 1965), 42–43.
17. Moya, *Cousins and Strangers*, 117.
18. Joaquim Moreira de Souza, quoted in Araújo, "A saga dos arigós."
19. Hirschman, *Journeys Toward Progress*, 13–17.
20. Frederico de Castro Neves, "Getúlio e a seca: políticas emergenciais na era Vargas," *Revista Brasileira de História* 21, 40 (2001): 107–29.
21. Instituto Brasileiro de Geografia e Estatística, *Censo demográfico: População e habitação (Série Regional, Parte VI-Ceará, Tomo 1)* (Rio de Janeiro: IBGE, 1940), 1.
22. Information on population of Ceará's municipalities is found in letter from Jorge M. da Rocha to Keeler, Fortaleza, August 9, 1943, NA, RG 229, Box 1278.
23. Walter W. Hoffmann to Walter J. Donnelly, Fortaleza, October 5, 1944, NA, RG 84, Box 12.
24. See L. F. Raposo Fontenelle, *Rotina e fome em uma região cearense: estudo antropológico* (Fortaleza: Imprensa Universitária do Ceará, 1969), 51–66; Allen W. Johnson, *Sharecroppers of the Sertão: Economics and Dependence on a Brazilian Plantation. (*Stanford, Calif.: Stanford University Press, 1971), 64, 78. See also Walter W. Hoffmann to Walter J. Donnelly, January 9, 1945, Re: Annual Economic Review of Ceará [for 1944], NA, RG 84, Box 14.
25. Instituto Brasileiro de Geografia e Estatística, *Censo Demográfico: População e Habitação*, 1.
26. Johnson, *Sharecroppers of the Sertão*, 21.
27. See *Correio do Ceará*, February 18, 1943, in NA, RG 84, Box 12. On folk Catholicism in the Brazilian sertão, see Ralph Della Cava, *Miracle at Joaseiro* (New York: Columbia University Press, 1970); Robert M. Levine, *Vale of Tears*: *Revisiting the Canudos Massacre in Northeastern Brazil, 1893–1897* (Berkeley: University of California Press, 1992).
28. Walter W. Hoffmann, American consul, to Ambassador Adolf A. Berle Jr., Fortaleza, August 14, 1945. NA, RG 234, Box 56.
29. "Ligeiros comentarios ao quadro de Assistência Médica de Inspetoria Federal de Obras Contra as Secas relativo aos meses de janeiro, fevereiro, e março de 1942," *Boletim do IFOCS*, 17, 1 (Jan-March, 1942).
30. Menezes Pimentel to Vargas, Fortaleza, April 3, 1942, AN, GCPR, Box 92, Processo 9133.

31. Memorandum from Charles Wagley to Dr. Bernard Krug regarding Ceará Drought, November 18, 1942, NA, RG 84, Box 5.
32. Neves, "Getúlio e a seca," 116.
33. Menezes Pimentel to Vargas, Fortaleza, January 12, 1943, AN, GCPR, Box 460, Interventoria do Ceará, 1941–44, Processo 1312.
34. On the challenge of public policy see Hirschman, *Journeys Toward Progress*; and Anthony L. Hall, *Drought and Irrigation in North-East Brazil* (Cambridge; New York: Cambridge University Press, 1978). On the administrative history of IFOCS, see Andrade, *Contribuição à história administrativa do Brasil*, 235–66; Thomaz Pompeu Sobrinho, "As seccas do Nordeste (1825–1920)," in *Livro do Nordeste, commemorativo de primeiro centenário do Diário de Pernambuco, 1825–1925. Recife, 7 de novembro de 1925* (Pernambuco, Brazil: Officinas do Diário de Pernambuco, 1925), 49–52. For an extensive bibliography on northeastern drought, see Aziz Nacib Ab'saber, "Referências bibliográficas do Nordeste seco," *Estudos Avançados* 13, 36 (May–August, 1999). For an interdisciplinary account weaving history, literature, art, and travelogue see Nicholas Gabriel Arons, *Waiting for Rain: The Politics and Poetry of Drought in Northeast Brazil* (Tucson: University of Arizona Press, 2004).
35. Hall, *Drought and Irrigation*, 16–17; Hirschman, *Journeys Toward Progress*, 13–17.
36. Erwin P. Keeler, agricultural attaché, American Embassy in Rio de Janeiro, "Drought in Northeastern Brazil," April 15, 1942. NA, RG 166, Box 17.
37. For a discussion of the cotton economy in the northeastern backlands, see Linda Lewin, *Politics and Parentela in Paraíba: A Case Study of Family-Based Politics in Brazil* (Princeton: Princeton University Press, 1987).
38. Hall, *Drought and Irrigation*, 2–4, 18, 33. For a superb analysis of agricultural landholding patterns and gender dynamics in nineteenth-century Ceará, see Martha S. Santos, *Cleansing Honor with Blood: Masculinity, Violence, and Power in the Backlands of Northeast Brazil, 1845–1889* (Stanford: Stanford University Press, 2012).
39. Quoted in Villa, *Vida e morte no sertão*, 93.
40. On the great drought of 1877–79, see Roger L. Cunniff, "The Great Drought, 1877–1889," (Ph.D. diss., University of Texas, Austin, 1970); for elite interpretations blaming the victims, see Gerald Michael Greenfield, "The Great Drought and Elite Discourse in Imperial Brazil," *Hispanic American Historical Review* 72, 3 (1992): 375–400.
41. Hirschman, *Journeys Toward Progress*, 22–28. See also Eve Buckley, "Drought in the Sertão as a Natural or Social Phenomenon: Establishing the Inspetoria Federal de Obras Contra as Secas, 1909–1923," *Boletim do Museu Paraense Emilio Goeldi Ciências Humanas* 5, no. 2 (May-August 2010), 379–98.
42. Andrade, *Contribuição à História Administrativa*, 247–55.
43. Phyllis Faria and Leo Callahan, Annual Review-1943, Pernambuco Consular District, Pernambuco, April 5, 1944, NA, RG 166, Box 95.
44. Hall, *Drought and Irrigation*, 5; Hirschman, *Journeys Toward Progress*, 42–43; Villa, *Vida e morte no sertão*, 159; Antonio Callado, *Os industriais da seca e os "Galileus" de*

Pernambuco: Aspectos da Luta pela Reforma Agrária no Basil (Rio de Janeiro: Editora Civilização Brasileira, 1960).

45. Manoel Taigy de Queiroz Mello to Vargas, Taperoá, Paraíba, February 20, 1944, AN, GCPR, Box 3843, Proc. 8236.
46. Hirschman, *Journeys Toward Progress*, 22–47; Hall, *Drought and Irrigation*, 22–53.
47. Kenneth Hewitt, "The Idea of Calamity in a Technocratic Age," in Kenneth Hewitt, ed., *Interpretations of Calamity from the Viewpoint of Human Ecology (*Boston: Allen and Unwin, 1983), 3–32. For northeastern Brazil, see the discussion in Nancy Scheper-Hughes, *Death without Weeping: The Violence of Everyday Life in Brazil* (Berkeley: University of California Press, 1992).
48. Fontenelle, *Rotina e fome em uma região cearense*, 137–42.
49. José Guimarães Duque, "O fomento da produção agrícola," *Boletim da IFOCS* 2, 2 (April-June, 1939): 159–62.
50. Francisco Chagas da Silva, *Quixadá nos anos de 1910 a 1942* (Fortaleza: São Francisco, 1977), 86.
51. Hirschman, *Journeys Toward Progress*, 22–53.
52. Cesar Barreira, *Trilhas e atalhos do poder: Conflitos sociais no sertão* (Rio de Janeiro: Rio Fundo, 1992), 45.
53. Harold Sims, American vice consul, "Review of Strategic Northeastern Brazilian Raw Products in Relationship to Wartime Influences," Pernambuco, October 2, 1939, NA, RG 166, Foreign Agricultural Service, Narrative Reports (1920–1941) Brazil: Folders Land through Rice; Walter W. Hoffmann, "Ceará Cotton," Fortaleza, August 10, 1944, NA RG 166, Foreign Agricultural Service, Narrative Reports (1942–1945) Brazil: Cooperatives-Cotton [Box 56]. Thomaz Pompeu Sobrinho, "O algodão como subsidiário das obras contra as secas," *Boletim da IFOCS* 1, 2 (February 1934): 65–72; Waldery Magalhães Uchoa, *Através do sertão* (Fortaleza: Tipografia Luso-Brasileira, 1938), 36–37.
54. Robert S. Platt, *Latin America: Countrysides and United Regions* (New York: McGraw Hill, 1943), 434–38. See also José Bonifácio de Sousa, *Quixadá e Serra do Estevão* (Fortaleza: Universidade Federal do Cear á, 1997), 84–85.
55. Hoffmann, "Ceará Cotton."
56. Leo J. Callanan, American consul, to Ambassador Jefferson Caffery, Recife, November 6, 1942, NA, RG 166, Box 57.
57. Prescott Childs, "Carnauba Wax," American Embassy, Rio de Janeiro, March 18, 1941, NA, RG 166, Box 18; Humberto R. de Andrade and Arthur Salgado, *Cera de Carnaúba*, 2nd ed. (Ceará: Iracema, 1945), 8–9; Dudley E. Cyphers, American vice consul, Carnaúba Wax Industry-Ceará, Fortaleza, May 13, 1944, NA, RG 166, Box 64.
58. Raimundo Girão, *História econômica do Ceará* (Fortaleza: Editora Instituto do Ceará, 1947), 379; Cicinato Ferreira Neto, *Estudos de história Jaguaribana: documentos, notas e ensaios diversos para história do baixo e médio Jaguaribe* (Fortaleza: Premius, 2003), 449–53.
59. Cyphers, Carnaúba Wax Industry; Dr. José Lins, chefe do Posto do Senador

Pompeu, to Hyder Correa Lima, Fortaleza, March 18, 1943, AN, PAR, Caixa 4, Doc. 7.

60. See Ferreira Neto, *Estudos de história Jaguaribana*, 449–53; and Girão, "Economia do Maná," *Valor* 7, no. 36 (May 1944), 31.
61. Machado, "Relatório de uma viagem de inspeção," 54–56. The same point was made by Carlos dos Santos Veras, "A carnaubeira: sua influência na sociedade e na economia do nordeste," *Cultura Política* 2, 17 (July 1942): 183.
62. Harold Sims, American vice consul, "Oiticica: Northeast Brazil," Pernambuco, April 27, 1940, NA, RG 166, Box 18; Report of United States Vegetable Oil Mission to Brazil, March 9 to April 28, 1942, Washington, June 1942, NA, RG 229, Box 1343; Philip P. Williams, vice consul, American Consulate General, Brazilian Oiticica Oil, Rio de Janeiro, October 23, 1939, NA, RG 166, Box 18.
63. Pimentel Lira, "Farinha de Mandioca," *Nordeste Agrícola* 4, 1–2 (Sept-Oct 1939): 21–29.
64. Mike Davis analyzes the great drought in northeastern Brazil in comparative global perspective as shaped by El Niño's Southern Oscillation and the spread of agroexport capitalism in the developing world. See Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London: Verso, 2001).
65. William Preston Rambo, American vice consul to secretary of state, Fortaleza, April 4, 1942, NA, RG 84, Foreign Service Posts of the Department of State, Brazil, Fortaleza Consulate, General Records, 1942, vols. I–II.
66. Sousa, *Quixadá*, 91.
67. Memorandum from Charles Wagley to Dr. Bernard Krug regarding Ceará Drought.
68. Joachim Alves de Freitas to Vargas, Jaguaribe, April 21, 1942, AN, GCPR, Box 92, Processo 10097.
69. José Pires Ferreira to Vargas, Queimados, December 8, 1943, AN, GCPR, Box 3826, PR 608.
70. Dondon Feitosa to Fernandes Távora, Fazenda Abraial, Tauá, July 10, 1942, Arquivo Publico do Estado do Ceará [herein APEC], Fundo Virgilio Távora [VT], Subssérie Fernandes Távora, Caixa 12 (Cartas Recebidas do Brasil).
71. See the SEMTA release forms in AN, Fundo Paulo Assis Ribeiro, Caixa 4, Doc. 7.
72. Paulo de Brito Guerra, *Flashes das Secas: Coletânea de fatos e histórias reais* (Fortaleza: Divisão de Documentação, 1977), 15.
73. Kênia Sousa Rios. *Campos de Concentração no Ceará: Isolamento e poder na seca de 1932 (*Fortaleza: Museu do Ceará, Secretaria de Cultura e Desporto do Ceará, 2001), 76.
74. Machado, "Relatório de uma viagem de inspeção," 66.
75. Memorandum from Charles Wagley to Dr. Bernard Krug regarding Ceará Drought.
76. Guerra, *Flashes das Secas*, 3, 17.
77. Alberto Santiago Galeno, *Território dos Coronéis* (Fortaleza: Editora Henriqueta Galeno, 1988), 48–49.

78. Ananias Arruda, prefeito municipal Baturité, to Vargas, Saboeiro, July 3, 1942, AN, GCPR, Box 92, Processo 21173.
79. See Diógenes Nogueira to Vargas, Jaguaribe, May 28, 1942, AN, GCPR, Box 92, Processo 9136; memorandum from Charles Wagley to Dr. Bernard Krug regarding Ceará Drought; Neves, "Getúlio e as secas," 117.
80. Pedro Oto Rodrigues to Vargas, Quixadá, April 6, 1942; Mons. José Lima, Pe. Manoel Kermes Monteiro, Pe. Raimundo Monteiro Dias to Vargas, Icó, April 8, 1942, AN, GCPR, Box 92, Processo 9560.
81. Brazilian Field Party-SESP, Project Description, Project MM-FOR-5–1 (Alagadiço, Fortaleza), 1943. FIOC, SESP, Box 21, Folder 25; Menezes Pimentel to Vargas, Fortaleza, January 12, 1943, AN, GCPR, Box 460, Interventoria do Ceará, 1941–44, Processo 1312.
82. Jean-Pierre Chabloz, untitled document, n.d., Museu de Arte da Universidade Federal do Ceará [herein MAUC], Arquivo Jean-Pierre Chabloz [AJPC], SEMTA, Diários; and Jean-Pierre Chabloz, *Revelação do Ceará* (Fortaleza: Secretaria de Cultura e Desporto do Estado do Ceará, 1993), 22. On the role of the railroads in the drought of 1932 in Ceará, see Rios, *Campos de Concentração*, 10–12.
83. See "Metrópoles do Brasil: Fortaleza," *Cultura Política* 1, 8 (October 1941): 170–84; Linda M. P. Gondim, "Creating the Image of a Modern Fortaleza: Social Inequalities, Political Changes, and the Impact of Urban Design," *Latin American Perspectives* 31, 2 (March 2004): 63–65; Rios, *Campos de Concentração*, 23–26.
84. Waldo David Frank, *South American Journey* (New York: Duell, Sloan and Pearce, 1943), 319–20.
85. Machado, "Relatório de uma viagem de inspeção," 42.
86. "Os cearenses e o vale do Rio Mar," *O Estado*, April 20, 1943.
87. Pierce Archer III to Doria de Vasconcelos, Rio de Janeiro, October 20, 1942, FIOC, SESP, Box 20, Folder 16; Berent Friele to Hyder Correa Lima, Rio de Janeiro, October 19, 1942; Hyder C. Lima to Berent Friele, Fortaleza, October 26, 1942, NA, RG 229, Box 1343.
88. Hyder C. Lima to Berent Friele, Fortaleza, October 26, 1942, NA, RG 229, Box 1343; Dr. G. M. Saunders, chief of field party, Brazil, to Dr. G. C. Dunham, director of Division of Health and Sanitation, OCIAA, Rio de Janeiro, August 4, 1943, NA, RG 229. Box 1334; "Assistência aos soldados da 'batalha da borracha,'" *A Manhã*, January 2, 1943.
89. "Economic Mobilisation and Man-Power Problems in Brazil," 724.
90. Rios, *Campos de Concentração*, 33.
91. José Queiroz Pessoa to Getúlio Vargas, Quixadá, April 5, 1942; and José Ribeiro to Getúlio Vargas. AN, GCPR, Box 92, Processo 9560.
92. See Lustosa, *Carta Pastoral*; "Absoluto éxito da Campanha do Mil Réis do C.E.C. na Zona Jaguaribana," *O Unitário*, April 5, 1942; "Campanha em prol dos flagelados," *Correio do Ceará*, May 28, 1942; "Roupa para os flagelados cearenses," *Correio do Ceará*, June 9, 1942; Mons. José Lima, Pe. Manoel Kermes Monteiro, and Pe. Raimundo Monteiro Dias to Vargas, Icó, April 8 1942, AN, GCPR, Box 92, Processo 9560; Macario Maio de Freitas, Arquivo de Diocese de Limoeiro do

Norte, Paróquia do Riacho do Sangue, 1942, Livro de Tombo, Número 2, Jaguaretama.

93. J. Torquato Praxedes Pessoa to Vargas, Fortaleza, July 6, 1942, AN, GCPR, Box 92, Processo 21600.
94. Memorandum from Charles Wagley to Dr. Bernard Krug regarding Ceará Drought.
95. See, for example, "Icó sob a ameaça dos flagelados," *O Unitário*, April 1, 1942; "Assaltado o horário pelos flagelados," *O Unitário*, April 5, 1942; "Armado a faca, os retirantes assaltam os comerciantes," *O Unitário*, April 6, 1942; "Malandros e exploradores dificultam um auxílio mais eficaz aos flagelados," *Correio do Ceará*, May 6, 1942; Machado, "Relatório de uma viagem de inspeção," 34.
96. Neves, *A multidão e a história*.
97. Lustosa, *Carta Pastoral*, 52.
98. See José Ribeiro to Getúlio Vargas, Pentecoste, April 6, 1942, AN, GCPR, Box 92, Processo 9560; Neves, "Getúlio e a seca," 113–14; Neves, *A multidão e a história*, 105; Simone de Souza, "Da 'Revolução de 30' ao Estado Novo," 298–316.
99. Machado, "Relatório de uma viagem de inspeção," 78.
100. Lustosa, *Carta Pastoral*, 38.
101. "140 vítimas da seca ja estão abrigadas em Jm. Távora," *Correio do Ceará*, May 15, 1942.
102. Dr. José Lins, chefe do Posto do Senador Pompeu, to Hyder Correa Lima, Fortaleza, March 18, 1943; letter from SEMTA Secção de Disciplina to Hyder Correa Lima, Fortaleza, May 19, 1943, AN, PAR, Caixa 4, Doc. 7; "Contrato-padrão de trabalho nos seringais," *Gazeta de Notícias*, April 25, 1943.
103. Estado do Ceará, *Relatório de 1943 apresentado ao Exmo. Sr. Dr. Getúlio Vargas presidente da República pelo Dr. Francisco de Menezes Pimentel* (Fortaleza: Imprensa Official, 1945), 191–200; Walter W. Hoffmann, American consul, to Walter J. Donnelly, chargé d'affaires, U.S. Embassy, Re: Annual Economic Review of Ceará [for 1944], Fortaleza, January 9, 1945, NA, RG 84, Box 14; Reginald S. Kazanjian, Second Secretary of U.S. Embassy, Increased Cost of Living in Ceará, Brazil, Rio de Janeiro, July 8, 1944, NA, RG 166, Box 60.
104. Walter W. Hoffman, New Rolling Stock for the Rede Viação Cearense, Fortaleza, August 27, 1945, NA, RG 84, Box 5.
105. Hoffmann to Donnelly, Annual Economic Review of Ceará.
106. S. B. Fenne, "The Following Information was Gathered in Part from the Departamento Estadual de Estatística do Ceará," September 1, 1944, NA, RG 84, Box 12.
107. Reginald S. Kazanjian, second secretary of U.S. Embassy, Increased Cost of Living in Ceará, Brazil, Rio de Janeiro, July 8, 1944, NA, RG 166, Box 60.
108. SEMTA, "Relação dos Trabalhadores Cujas Famílias Estão no Núcleo de Porangabussu," n.d; Antonio Moreira da Silva, Manoel Ferreira da Silva, and Antonio Batista de Souza to Dr. Paulo, Fortaleza, March 2, 1943, MAUC, AJPC; "Recrutamento," AN, PAR, Caixa 5, Doc. 42; SEMTA, Depto. de Assistência Social, Relação No. 1, Demonstrativo das quotas relativas à assistência dos dependentes dos trabalhadores, AN, PAR, Caixa 5, Doc. 37.

109. Memorandum from Charles Wagley to Dr. Bernard Krug regarding Ceará Drought.
110. "Lloyd Brasileiro," 302.
111. *Relatório da Diretoria da* ACA, *Ano Social de 1940*, 132.
112. *Revista de Imigração e Colonização* 3, 2 (August 1942), 10.
113. Samuel Benchimol, *O cearense na Amazônia*, 82.
114. "Relação do Pessoal da Quarta turma que seguem para Manaus no dia 9 de março de 1943 para a Rubber Dev. Corporation," NA, RG 84, Box 1.
115. Darrel Miller, "Replacement of Traditional Elites: An Amazon Case Study," in John Hemming, ed., *Change in the Amazon Basin*, Vol. 2 (Manchester: University of Manchester Press, 1985), 158–71.
116. José Carlos Ribeiro, Relatório de 1943, SESP, Projeto de Migração, NA, RG 229, Office of Inter-American Affairs, Records of the Department of Basic Economy, Health and Sanitation Division, Monthly Progress Reports of Field Party (E-143), Brazil, March–December 1943.
117. Interview with Clovis Barreto, Manaus, July 2001.
118. Lopes de Andrade, *Forma e efeito das migrações do Nordeste* (Paraíba: União, 1952), 8.
119. Otis E. Mulliken and Sarah E. Roberts, "Labor and Social Welfare," in Arthur P. Whitaker, ed., *Inter-American Affairs, 1943* (New York: Columbia University Press, 1944), 67–68.
120. Werner Baer, *Industrialization and Economic Development in Brazil* (Homewood, Ill: Irwin, 1965), 173.
121. Martinello, *A "batalha da borracha,"* 209.
122. Vasconcelos, "Viagem de inspeção ao norte," 99.
123. Vasconcelos, "Viagem de inspeção ao norte," 99.
124. Statistics compiled from AN, PAR, Caixa 40, Docs. 7 and 7.5; and José Carlos Ribeiro, Relatório de 1943, SESP, Projeto de Migração, NA, RG 229, Office of Inter-American Affairs, Records of the Department of Basic Economy, Health and Sanitation Division, Monthly Progress Reports of Field Party (E-143), Brazil, March–December 1943.
125. Homer G. Pease and Bruce V. Worth, "Report of Pease and Worth for the Period of May 11 to June 15, 1942," PUL, RDC, ADR, Box 10, Folder Tech Report Pease and Worth.
126. SESP and Brazilian Field Part of IIIA, Final Summary of Project MM-IGU-5, Hospital and Medical Care for Migrants at CAETA Camp, Iguatu, FIOC, SESP, Box 21, Folder 27.
127. Walter W. Hoffmann, American consul to Walter J. Donnelly, Fortaleza, January 25, 1945, RG 84, Box 14; Phyllis Faria and Leo Callahan, Annual Review-1943, Pernambuco Consular District, Pernambuco, April 5, 1944, NA, RG 166, Box 95. See also F. L. Soper and D. B. Wilson, *Campanha contra o "Anopheles gambiae" no Brasil* (Rio de Janeiro: Ministério de Educação e Saúde, 1945), 4, 64.
128. See Cicinato Ferreira Neto, *Estudos de história Jaguaribana: documentos, notas e ensaios diversos para história do baixo e médio Jaguaribe* (Fortaleza: Premius, 2003), 449–53; Almeida, "Transportes Terrestres de Omnibus," in João Leandro de

Almeida, ed., *Guia da Cidade de Fortaleza* (Fortaleza: Empreza da Publicidade, 1939), 314–15; Girão, *História econômica do Ceará*, 449.

129. Hoffmann to Donnelly, Fortaleza, January 25, 1945.
130. Quoted in Ariadne Araújo, "A saga dos arigós," *O Povo*, June 21, 1998.
131. Pedro Alberto de Lima Valverde to Getúlio Vargas, Santo Amaro da Purificação, January 13, 1944, AN, GCPR, Box 3832, Folder 3206.
132. E. H. Christopherson, Chief of Party, Health and Sanitation Program in Brazil, Rio de Janeiro, April 11, 1945, NA, RG 229 Office of Interamerican Affairs, Records of the Department of Basic Economy Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, January–August 1944; SEMTA, Esboço de estrutura de serviços no Amazonas para servir de base a informações e publicidade," n.d., AN, PAR, Box 5, Doc. 63.
133. "Emigração para o norte: somente sertanejos em boas condições de saúde poderão seguir," *Correio do Ceará*, May 8, 1942.
134. Report of the Brazilian Field Party for the Month of October 1944. NA, RG 229, Office of Inter-American Affairs, Records of the Department of Basic Economy Health and Sanitation Division, Monthly Progress Reports (E-143), Brazil, August-November 1944; Histórico de dezembro de 1942 a 10 de fevereiro de 1943. AN, PAR, Caixa 5, Doc. 62.
135. Medical Care of Migrants Program: Workers Disqualified for Service in the Amazon Valley, January 1944. NA, RG 229, Office of Inter-American Affairs, Records of Department of Basic Economy: Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, August–November 1944.
136. E. Roquette-Pinto, "Contribuição à antropologia do Brasil," *Revista de Imigração e Colonização* 1, 3 (July 1940), 437–51.
137. SEMTA, Esboço da estrutura de serviços no Amazonas; Roquette-Pinto, "Contribuição à antropologia do Brasil."
138. J. P. Chabloz, untitled document, MUAC, AJPC, Diários.
139. Morales, *Vai e vem*, 198–200; see numerous release forms in AN, PAR, Caixa 4, Doc. 7.
140. Álvaro Ferraz and Andrade Lima Júnior, *A morfologia do homem do nordeste (Estudo biotipológico)* (Rio de Janeiro: José Olympio, 1939), 21–23, 91.
141. R. Paula Lopes, "Social Problems and Legislation in Brazil," *International Labour Review* 44, 5 (Nov. 1941): 504–5.
142. Ferraz and Lima Junior, *A morfologia do homem do nordeste*, 284–317.
143. See also Olivia Maria Gomes da Cunha, *Intenção e gesto: pessoa, cor, e a produção cotidiana da (in)diferença no Rio de Janeiro, 1927–1942* (Rio de Janeiro: Arquivo Nacional, 2002).
144. "Dr. Raimundo Renato de Almeida Braga," speech by José Waldo Ramos, published in *Revista do Instituto do Ceará*, LVIII (1944): 240–41.
145. Moreira, *Influências amazônicas*, 32.
146. Santos, *História econômica da Amazônia*, 99–100. See also Graham and Holanda Filho, *Migration, Regional and Urban Growth and Development in Brazil*; Girão, *História econômica do Ceará*, 392.

147. Sousa, *Quixadá*, 61–63.
148. See M. Barroso Ramos, "Seringueiros e Seringalistas," *Boletim da* ACA 6, 67 (February 1947): 15–19.
149. Lauro de Oliveira Lima, *Na Ribeira do Rio das Onças (Limoeiro do Norte)*, (Fortaleza: Assis Almeida, 1997), 428–29; Francisco Chagas da Silva, *Quixadá nos anos de 1910 a 1942* (Fortaleza: São Francisco, 1977), 83, 100; Miguel Porfírio de Lima, *Icó em fatos e memórias* (Icó: Igranol, 1995), 57–58.
150. See J. G. Araújo to Ranilson Costa, Manaus, October 4, 1943; Araújo to Maria Amaral Juvêncio, Manaus, May 26, 1943; Araújo to Maria Anastácia, Manaus, October 10, 1943; Araújo to Raimundo Magalhães, Manaus, October 2, 1943, MA, JGA, Box R1943; Ricardo Cantanhede to J. G. Araújo. Seringal Setenta, Rio Jamary, Jarú, MT, December 9, 1941; Cantanhede to J. G. Araújo, July 22, 1941, MA, JGA, Box 1941.
151. Antonia Telles de Mendonça to Getúlio Vargas, Manaus, October 17, 1941, AN, GCPR, Box 460, Interventoria do Amazonas, 1941–43.
152. Graham and Holanda Filho, *Migration, Regional and Urban Growth and Development in Brazil*.
153. Sousa, *Quixadá*, 60–61.
154. Moreira, *Influências amazônicas*, 56. For literary depictions, see Rodolpho Theóphilo's novel *O Paroara* (1889).
155. Eidorfe Moreira, *Influências amazônicas*, 39.
156. José Carvalho, *O matuto cearense e o caboclo do Pará: contribuição ao Folclore Nacional* (Fortaleza: Universidade Federal do Ceará, 1973), 102.
157. João Alves de Albuquerque, *Vida dos Municípios*, Volume 2 (Fortaleza: Editora A. Batista Fontenele, 1945), 84–87.
158. See Djalma Batista, "Os Távoras na Amazônia," *Jornal do Comércio* (Manaus), August 13, 1978.
159. Samuel Benchimol, "Population Changes in the Brazilian Amazon," in Hemming, ed., *Change in the Amazon Basin*, 44.
160. Euripedes A. Funes and Adelaide Gonçalves, "Eldorado no Inferno Verde: Quem vive no inferno se acostuma com os cães," in Adelaide Gonçalves and Pedro Eymar Barbosa Costa, eds., *Mais borracha para a vitória* (Fortaleza: MAUC; NUDOC/Brasília: Ideal Gráfica, 2008), 18.
161. Anderson, *Colonization as Exploitation*, 120–23. On Cearense migration to Pará, see also Franciane Lacerda Gama, "Migrantes cearenses no Pará: faces da sobrevivência (1889–1916)" (Ph.D. diss., Universidade de São Paulo, 2006), 148–49.
162. Weinstein, *The Amazon Rubber Boom*, 85.
163. Anderson, *Colonization as Exploitation*, 119; Santos, *História econômica da Amazônia*, 106–107; Vicente Salles, *Repente & Cordel: Literatura popular em versos na Amazônia* (Rio de Janeiro: FUNARTE. Instituto Nacional do Folclore, 1984), 129–39; Raimundo de Menezes, *Nas Ribas do Rio-Mar* (Rio de Janeiro: Anuario do Brasil, 1928), 112–13; Reuben Howard Brooks, "Flight from Disaster: Drought

Perception as a Force in Migration from Ceará, Brazil," Ph.D. dissertation, University of Colorado, 1972, 160.
164. Weinstein, "Persistence of Caboclo Culture in the Amazon," 97–98.
165. Platt, *Latin America*, 473–76.
166. Sousa, *Quixadá*, 61–63.
167. Rachel de Queiroz, *O quinze* (Rio de Janeiro: José Olympio, 1948), 87.
168. Boris Fausto, *A Concise History of Brazil*, trans. Arthur Brakel (Cambridge: Cambridge University Press, 1999), 234.
169. Martinello, *A "batalha da borracha,"* 57, 208.
170. Souza Pinto, "Geographia Econômica do Ceará," 29–30; Schurz, "The Distribution of Population in the Amazon Valley," 224; Villa, *Vida e Morte no Sertão*, 148–54.
171. Araújo Lima, "A explotação amazônica," in *Amazônia Brasileira*, 263.
172. Menezes, *Nas Ribas do Rio-Mar*, 171.
173. Brooks, "Flight from Disaster," 160.
174. Moreira, *Influências amazônicas*, 29.
175. See Wolff, *Mulheres da Floresta*.
176. Tastevin, *The Middle Amazon*, 88–89.
177. Antonio Teixeira Guerra, *Estudo geográfico do Território do Acre* (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1955), 66–67.
178. Gama, "Migrantes cearenses no Pará," 228.
179. Benchimol, *O cearense na Amazônia*, 37.
180. Tastevin, *The Middle Amazon*, 66–67; Andrade, quoted in Idorphe Moreira, *Influências amazônicas*, 41.
181. Family genealogies cited in Vicente Martins, *Diocese de Sobral: Subsídios para a História e Geneologias das Paróquias* (Fortaleza: Tipografia Brasil, n.d.). See also Lima, *Icó em Fatos*, 57–58.
182. Maria Pimentel Madeiro to Getúlio Vargas, Independência, Ceará, Mar. 31, 1941, AN, GCPR, Box 321, Interventoria do Amazonas.
183. João Amaro, *Retalhos de minha vida e poesias populares* (Fortaleza: Imprensa Oficial do Ceará, 1986), 38–44.
184. Jorge Gurgel do Amaral to Fernandes Távora, Novo Planeta, Amazonas, August 16, 1919; and Amaral to Távora, Coary, April 28, 1931, APEC, VT, FT, Cartas Recebidas do Brasil, Caixa 17.
185. Alfredo Lustosa Cabral, *Dez anos no Amazonas (1897–1907)* (Brasília: Senado Federal, 1984), 23.
186. Waldemiro Fernandes Távora to Fernandes Távora, Baturité, Rio Acre, Bolivia, October 20, 1917, APEC, VT, FT, Cartas Recebidas do Brasil, Caixa 21.
187. Johnson, *Sharecroppers of the Sertão*, 29–34, 77, 100–101.
188. See Morales, *Vai e vem*, 248.
189. Quoted in Benchimol, *O cearense na Amazônia*, 72.
190. IBGE, *Censo demográfico*, 6–8, 22–26.
191. Waldemiro Fernandes Távora to Fernandes Távora.

192. Weinstein, "Persistence of Caboclo Culture in the Amazon," 96–97.
193. IBGE, *Censo demográfico*, 8.
194. Benchimol also pointed out that the majority of the interviewees already had relatives in the Amazon, although they did not know necessarily how to find them. See Benchimol, *O cearense na Amazônia*, 33, 56–57.
195. John H. Edwards, Report on a trip by the Lloyd Brasileiro steamer *Comandante Ripper* from Fortaleza to Belém, accompanying 988 migrants, April 1944, Supplement to the Report of the Brazilian Field Party for the month of March 1944, Amazon Region, NA, RG 229, Records of Department of Basic Economy: Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, August–November 1944.
196. Gama, "Migrantes cearenses no Pará," 253.
197. Letter from Antonio Fernandes de Albuquerque to Paulo Assis Ribeiro, Fortaleza, April 16, 1943, AN, PAR, Caixa 4, Doc. 7.
198. Interview with Otávio Carlos Monteiro, Manaus, July 2001.
199. Leonidas Moreira to Fernandes Távora, Belém, February 14, 1931, APEC, VT, FT, Cartas Recebidas do Brasil, Caixa 17.
200. Cyriaco Fernandes to Fernandes Távora, Seringal Forquilha, Rio Juruá, Amazonas, 1930, APEC, VT, FT, Cartas Recebidas do Brasil, Caixa 17.
201. Interview with Delsuite Felipe Carlos, Manaus, July 2001.
202. Candace Slater, *Stories on a String: The Brazilian Literatura de Cordel* (Berkeley: University of California Press, 1982), 7.
203. Salles, *Repente & Cordel*, 95–96.
204. Walmir de Albuquerque Barbosa, *O cordel na Amazônia* (Manaus: Editora da Universidade do Amazonas, 1996), 1–4; 25–28.
205. See Salles, *Repente & Cordel*, 111–28.
206. See Pedro Calmon, *História do Brasil na poesia do povo* (Rio de Janeiro: Bloch, 1973), 293–94.
207. Reprinted in Ruth Brito Lemos Terra, *A literatura de folhetos nos Fundos Villa-Lobos* (São Paulo: Instituto de Estudos Brasileiros, 1981), 68–73.
208. Juvenal Galeno, *Lendas e Canções Populares*, Volume II (Fortaleza: Imprensa Universitária do Ceará, 1965), 228–30.
209. "Carta de um soldado da borracha," *O Estado*, April 30, 1943.
210. Sebastião Felix de Oliveira to Regina Frota, May 31, 1943, MAUC, AJPC.
211. "Continua palpitante o interesse pela correspondência dos soldados da Borracha," *Correio da Semana*, June 11, 1943.
212. Manuel Francisco da Silva to Regina Frota Chabloz, Pouso do Prado (Fortaleza), July 6, 1943, MAUC, AJPC.
213. Leopoldino Casimiro Lucena to Regina Chabloz, Belém, April 24, 1943, MAUC, AJPC.
214. Letters from Juca Cassindé to Regina Frota, Senador Pompeu, one undated, the other from June 13, 1943, MAUC, AJPC.
215. Letters from Alfredo Mesquita de Oliveira to Regina Frota from Manaus, July 15, 1943, and another undated. Information on the number of migrants' dependents

is from SEMTA, Relação dos Trabalhadores Cujas Famílias Estão no Núcleo de Porangabussu, n.d, MAUC, AJPC.

216. Manoel de Souza Viana to Regina Frota Chabloz, Manaus, August 13, 1943.
217. APEC, Fundo Tribunal de Justiça, Serie Ações Criminais, Subssérie Homicídios, Caixa 16, Processo 5.
218. Walter W. Hoffman, "Migration from Ceará to the Amazon," Fortaleza, April 18, 1944. NA, RG 166, Foreign Agricultural Service, Narrative Reports 1942–1945, Brazil: Land Policy-Livestock.
219. Elcidia Galvão to Cursino de Alcântara Filizola, Fortaleza, June 20, 1943, MAUC, AJPC.
220. Maria Emília Ramos Câmara to Getúlio Vargas, Tacima, PB, April 24, 1944, AN, GCPR, Caixa 3861, Proc. 15464.
221. Elcidia Galvão to Cursino de Alcântara Filizola, Fortaleza, June 20 and 27, 1943, MAUC, AJPC.
222. Jovelina Luciana de Souza and others to Getúlio Vargas, Mossoró, June 20, 1944. AN, GCPR, Caixa 3900, File 31896.
223. Joana Abreu to Guilhermino de Abreu, Fortaleza, June 26, 1943, MAUC, AJPC.
224. Edith Dionisio de Oliveira to Regina Chabloz, Fortaleza, June 16, 1943, MAUC, AJPC.
225. Quoted in Informativo da Diretoria Executiva da ANASPS para as Gerências Executivas do INSS Ano 2-Edição Nº 085 Brasília, 27 de Maio de 2003. http://www.anasps.org.br/index.asp?id=516&categoria=29&subcategoria=46. Accessed March 4, 2008.
226. Henrique Doria de Vasconcelos, "A colonização da Amazônia," *Revista de Imigração e Colonização* 4, 1 (March 1943): 87.
227. SEMTA, Depto de Assistência Social, Demonstrativo das quotas relativas à assistência dos dependentes dos trabalhadores. AN, PAR, Caixa 5, Doc. 37; "Movement of Workers from the Tapanã Camp (Belém) Up to September 30, 1943," SAVA, General Scheme of the Movement of Workers in the Amazon Valley up to September 30, 1943 (Translation), NA, RG 234, Box 63.
228. Vasconcelos, "A colonização da Amazônia," 87.
229. Quoted in Informativo da Diretoria Executiva da ANASPS.
230. Relatório do Serviço de Alimentação do Pouso de Teresina, Fortaleza, julho de 1943. AN, PAR, Caixa 4, Doc. 55.
231. José Carlos Ribeiro, SESP Projeto de Migração, Relatório de 1943. NA, RG 229 Office of Inter-American Affairs, Records of the Department of Basic Economy Health and Sanitation Division, Monthly Progress Reports (E-143), Brazil, March–December 1943.
232. Relatório Geral da Viagem Fortaleza-Sobral-Tianguá-Teresina-S. Luiz, Efetuada no Periódo de 24 de junho a 11 de julho de 1943, pelos Doutores Fausto Pereira Guimarães e Jayme Lins de Almeida, do Depto. da Mobilização, Fortaleza, July 27, 1943. AN, PAR, Caixa 4, Doc. 29.
233. *Situação Econômica, Separata do Relatório Apresentado ao Senhor Presidente da República pelo Coronel Joaquim de Magalhães Cardoso Barata* (Rio de Janeiro: Im-

prensa Nacional, 1944), 107; Henrique Mindlin, Special Assistant to the Coordinator, to James A. Russell Jr., RDC, RJ, May 25, 1943. NA, RG 234, Box 63.

234. Russ Symontowne, "U.S. Losing Its Battle for Natural Rubber in the Amazon Despite Spending Millions," *Daily News* (NY), November 15, 1943.
235. Lloyd Brasileiro, *Relatório 1944*, 22.
236. Report of the Brazilian Field Party for the Month of January 1944. NA, RG 229, Office of Inter-American Affairs, Records of the Department of Basic Economy Health and Sanitation Division, Monthly Progress Reports (E-143), Brazil, January–August 1944.
237. C. A. Sylvester to R. B. Bogardus, CAETA Labor Movement, Rio de Janeiro, July 5, 1944. NA, RG 234, Box 63.
238. Campos, *Políticas internacionais de saúde na Era Vargas*, 150–55.
239. SESP, Mês de julho de 1945, Distrito de Sena Madureira, FIOC, SESP, Box 17, Doc. 2.
240. Edward McLaughlin to sec. of state, Belém, June 2, 1943, "Observations and suggestions concerning the furtherance of the rubber program." NA, RG 234, Box 56.
241. Institute of Inter-American Affairs, Division of Health and Sanitation, Brazilian Field Party, Report for the Year 1943. NA, RG 229, Box 1334.
242. Cap. Oscar Passos to Getúlio Vargas, Rio Branco, April 15, 1942. AN, GCPR, Caixa 388, Proc 10423.
243. José Stenio Lopes, *Rio de esquecimento* (Fortaleza: Clã, 1956), 47, 108.
244. William L. Clark to Berent Friele, September 15, 1942, NA, RG 229, Box 1333.
245. Benchimol, *O cearense na Amazônia*, 42–43.

Chapter 5: War in the Amazon

1. On dependency theory, see Peter F. Klaren and Thomas J. Boosert, *Promises of Development: Theories of Change in Latin America* (Boulder: Westview Press, 1986).
2. W. L. Clayton, assistant secretary, Dept. of Commerce, to Captain Ralph Davidson, Bureau of Aeronautics, Navy Dept., Washington, DC, August 3, 1942. NA, RG 234, Box 35; Russ Symontowne, "U.S. Losing Its Battle for Natural Rubber in the Amazon Despite Spending Millions," *Daily News* (NY), November 15, 1943.
3. Report on Orinoco-Casiquiare-Negro Waterway, Venezuela-Colombia-Brazil, by U.S. Army Corps of Engineers, prepared for CIAA, July 1943. RAC, Rockefeller Family, RG 4, Washington DC Files, CIAA bound volumes. On the Casiqiuiare canal, see also Reich, *The Life of Nelson A. Rockefeller*, 242–43; McCann, *The Brazilian-American Alliance*, 396–97.
4. Clayton to Davidson, August 3, 1942; and Russ Symontowne, "U.S. Losing Its Battle for Natural Rubber in the Amazon Despite Spending Millions," *Daily News* (NY), November 15, 1943; Walter J. Donnelly, "Report of the Rubber Development Program in the Amazon Valley," American Embassy, RJ, June 5, 1943. NA, RG 229, Box 1333.
5. Donnelly, "Report of the Rubber Development Program in the Amazon Valley"; Virginia Prewett, "Good Neighbors," *Washington Post* (n.d.), FDRPL, HAW, Papers

as Vice President, 1941–1945; Frank Kelley, "Hard-Boiled Realism Replaces Utopian Plan in Amazon Jungle," *New York Herald Tribune*, November 26, 1943; McCann, *The Brazilian-American Alliance*, 391–92.

6. The Development of Wild and Cultivated Natural Rubber in Western Hemisphere, November 23, 1945. NA, RG 234, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil, General and South Brazil; Edward D. McLaughlin, special representative, Report on Rubber Development Corporation's Organization and Liquidation, January 31, 1946. NA, RG 234, Central File 1942–1949, Brazil Monthly Reports from 1945–1946 through Jan. 1948.
7. Statement made by Douglas H. Allen, president, Rubber Development Corporation, before the Gillette Committee of the United States Senate in response to a request "For Information Concerning the Procurement of Rubber from South America and the Expenditures Connected Therewith." PUL, RDC, ADR, Box 7, Memoranda, Folder 3, Document 5; "Amazon Rubber Costs US 82 Cents, not $500 a Pound, Allen Asserts," *Wall Street Journal*, December 10, 1943; "Rubber from Amazon Costs U.S. $1.12 a Pound," *Akron Beacon Journal*, December 9, 1943; "Hits Cost Reports on Amazon Rubber," *New York Times*, December 10, 1943.
8. R. B. Bogardus, asst. to the president, chief, Brazil Section, to E. E. Long, director, BCB, May 26, 1943. NA, RG 234, Box 32.
9. Frank E. Nattier Jr., Report on Travel to North Brazil, March 19, 1942. NA, RG 229, Box 1343.
10. Martinello, *A "batalha da borracha."*
11. Bunker and Ciccantell, *Globalization and the Race for Resources*, 49. On the role of chemists and botanists in contributing to global inequalities, see Daniel R. Headrick, "Botany, Chemistry, and Tropical Development," *Journal of World History* 7, 1 (1996): 14.
12. Jones, *Fifty Billion Dollars*, 415; Knorr, *World Rubber*, 5; Polenberg, *War and Society*, 18; Conant, Compton, Baruch, Report of the Rubber Survey Committee, 14.
13. Peter J. T. Morris, *The American Synthetic Rubber Research Program* (Philadelphia: University of Pennsylvania Press, 1989), 8; Tuttle, "The Birth of an Industry," 62–65.
14. I have borrowed here from Smith's discussion of petrochemicals. See Smith, *Uneven Development*, 141.
15. Frank Kelley, "23,000 Tons of Rubber for U.S. Expected from Amazon in 1943," *New York Herald Tribune*, November 25, 1943.
16. David Brody, "The New Deal and World War II," 267–89.
17. Memo from Roosevelt to Wallace, Washington, March 2, 1943. FDRPL, OF 4226, Board of Economic Warfare 1943, Box 1; Gellman, *Good Neighbor Policy*, 169.
18. Jesse Jones to Senator Glass, chairman of Senate Committee on Appropriations, July 5, 1943, released to the press on July 6, 1943. FDRPL, Henry A. Wallace, Papers as Vice President 1941–45, General Correspondence, Box 61; Walker, *Henry A. Wallace*, 96.
19. D. H. Allen to S. Maurice McAshan Jr., July 1, 1943. NA, RG 234, RDC, Coun-

try Correspondence File, 1942–45, Brazil, Amazon Vicinity, Box 72; Summary of Matters Discussed at a meeting Held June 23 Attended by Messrs. Jeffers, Dewey, Tompkins, Babcock, Caswell, Osborne, and Clark of the Rubber Director's Office, and by Messrs. Clayton, Allen, Chambers, and McAshan for Rubber Development Corporation, June 30, 1943. NA, RG 234, RDC, Country Correspondence File, 1942–45, Brazil, Amazon Vicinity, Box 72; D. H. Allen, "Memorandum to the Treasurer," October 2, 1943. NA, RG 234, Box 72; Edward D. McLaughlin, American consul, to secretary of state, Pará, Sept. 1, 1943, "Observations on Rubber Development Corporation at Manaos Following Revised Program." NA, RG 229, Box 1333; McCann, *The Brazilian-American Alliance*, 391–92.

20. Agreement to Which Decree-Law No 5,813 Applies, Rio de Janeiro, September 16, 1943. NA, RG 234, RDC, Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72.
21. D. H. Allen to Valentim F. Bouças, January 26, 1944. NA, RG 234, RDC, Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72.
22. Report on the Operation of Rubber Development Corporation, February 23, 1943, to August 31, 1944, Washington, DC, September 30, 1944, PUL, RDC, ADR, Box 3 RDC-History and Organization, Folder 10, Document 3.
23. Translation of interview of S. M. McAshan Jr., published in *Jornal do Comércio* on August 8, 1943, and attached to letter from Bernard P. Bogy Jr., administrative assistant, to Carl A. Sylvester, director, RDC, Manaus, August 18, 1943. NA, RG 229, Box 1282.
24. See London and Kelly, *The Last Forest*, 177–79.
25. Vernon Herbert and Attilio Bisio, *Synthetic Rubber: A Project that had to Succeed* (Westport, CT: Greenwood Press, 1985).
26. W. N. Walmsley Jr., Amazon Rubber program, Enclosure to Dispatch 13146 of October 18, 1943, from the Embassy at Rio de Janeiro, NA, RG 234, Box 72; Walter J. Donnelly, counselor of embassy for economic affairs, to secretary of state, Rio de Janeiro, October 18, 1943, PUL, RDC, ADR, Box 3, Folder 10, Doc. 1.
27. Phillips, *Brazil: Bulwark of Inter-American Relations*, 28–29.
28. See Drew Pearson, "Washington Merry-Go-Round," *Washington Post*, December 2, 1943; "Capitol Intensifies So. American Issue," *Washington Post*, November 29, 1943; Hugh Butler, "Our Deep Dark Secrets in Latin America," *Reader's Digest* (December 1943): 21–25; speech of Hon. Kenneth McKellar of Tennessee in the Senate of the United States, December 13, 1943, Congressional Record, RAC, Rockefeller Personal, RG 4, Washington, DC, Files, CIAA, Box 10, Folder 82; and Reich, *The Life of Nelson A. Rockefeller*, 244.
29. Ronald Hall Sharp, *South America Uncensored: Jungles of Fascism, Genuine Good-Neighborliness, Portrait of a Continent* (New York; Toronto: Longmans, Green and Co., 1945), 263.
30. S. M. McAshan Jr. to E. E. Kaiser, July 28, 1943. NA, RG 234, Box 78.
31. D. H. Allen, "Memorandum to the Treasurer," October 2, 1943. NA, RG 234, Box 72.

32. S.V. Sihvonen and H. C. Haines to H. B. Pease, Porto Velho, May 20, 1943, PUL, RDC, ADR, Box 8, Technician Reports; Walter J. Donnelly, counselor of embassy for economic affairs, "Report of the Rubber Development Program in the Amazon Valley," American Embassy, RJ, June 5, 1943. NA, RG 229, Box 1333.
33. Summary of Matters Discussed at a Meeting Held June 23 Attended by Messrs. Jeffers, Dewey, Tompkins, Babcock, Caswell, Osborne, and Clark, of the Rubber Director's Office, and by Messrs. Clayton, Allen, Chambers, and McAshan for Rubber Development Corporation, June 30, 1943. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil, Amazon Vicinity, Box 72.
34. "Special Report on Xapuri municipality seringueiros versus seringalistas including: progress report on Rio Acre, Acre territory, Brazil from Seringal Filipinas to Rio Branco," by F. C. Rebelo, Asst. Field Tech., Rio Branco, AC, Sept 15, 1944," PUL, RDC, ADR, Box 10, Folder Rebelo; "Rio Machado Field Trip," report of field technicians William Green and Harry Haines and asst. field technician Rubens Dickie, December 1944, PUL, RDC, ADR, Box 9, Folder Technician's Report—William Green, Harry Haines and Rubens Dickie; Philip H. Williams to C. Homer McDuff, Manaus, June 16, 1944, PUL, RDC, ADC, Box 18 (letters June 14–June 19, 1944), Folder 13, Document 6; and C. Homer McDuff to Francis A. Truslow, "August Monthly Report on Amazon Division," September 20, 1944. NA, RG 234, RDC Country Correspondence File, 1942–45, Brazil, Amazon Vicinity, Box 72.
35. Rubber Development Corporation Monthly Report for Amazon Division, November 1944. NA, RG 234, Box 75.
36. The telegrams are attached to the letter from João Cândido to Eduardo Levi, Eirunepé, April 14, 1944. PUL, RDC, ADR, Box 17, Letters April 25–28, 1944, Folder 13, Document 4.
37. Francis A. Truslow, RDC president, to Stephen Early, secretary of the president, Washington, DC, October 13, 1944, FDRPL, OF 510, Rubber industry 1943–1945, Box 2; E. B. Hamill, senior field technician to C. Homer McDuff, general manager, Amazon Division, RDC, Manaus, September 23, 1944, PUL, RDC, ADR, Box 19, Letters Sept. 18–25, 1944.
38. George T. Summerlin, chief of protocol, Department of State, to Major Edwin M. Watson, secretary to the president, Washington, DC, October 24, 1944; William D. Hassett, secretary to the president, to João Lopes da Silva, Washington, DC, January 17, 1945, FDRPL, OF 510, Rubber industry 1943–1945, Box 2.
39. See Coronil, *The Magical State*, 73–74.
40. Coronil, *The Magical State*, 73–74.
41. Leslie Bethell, "Brazil," in Leslie Bethell and Ian Roxborough, eds., *Latin America Between the Second World War and the Cold War, 1944–1948* (Cambridge: Cambridge University Press, 1997), 34; Edward O. Guerant, *Roosevelt's Good Neighbor Policy* (Albuquerque: University of New Mexico Press, 1950), 200; Rose-

mary Thorp, "The Latin American Economies in the 1940s," in Rock, ed., *Latin America in the 1940s*, 46.

42. Roberto Ribeiro Corrêa, "BASA: Seis Décadas de Mudança Institucional," in Armando Dias Mendes, ed., *Amazônia: Terra e Civilização*, Vol. 2 (Belém: BASA, 2004), 557.
43. See C. B. Manifold to E. B. Hamill, senior field technician, August 12, 1943, NA, RG 234, Box 32; H. G. Pease to Rubber Reserve Company, Porto Velho, October 27, 1942, PUL, RDC, ADR, Box 10, Folder Technician Report Pease; William MacKinnon to John H. Neumann, general field manager, Amazon Division, "Progress report on Afuá Municipality," n.d., PUL, RDC, ADR, PHW, Box 11, Folder 11.
44. See Weinstein, *The Amazon Rubber Boom*.
45. J. Caldwell King to Nelson A. Rockefeller, coordinator of Inter-American affairs, "Summary of Amazon Valley Survey, April 9 to May 28, 1942," PUL, RDC, ADR, Box 11, Progress and Area Reports 9/1; "Appendix I to New Area Report for Rio Negro by Field Technicians Harold E. Gustin and M.A. Polli, August 1942," PUL, RDC, ADR, Box 9, Folder Reports on Areas-Harold E Gustin; Santos, *História econômica da Amazônia*, 113; Glimedes Rego Barros, *Nos Confins do Extremo Oeste* (Rio de Janeiro: Biblioteca do Exército, 1993), 142.
46. G. R. Trimble Jr. and Milton Aguiar to C. Homer McDuff, Tefé, Rio Solimões, December 11, 1944, PUL, RDC, ADR, Box 12, Folder 1.
47. Seringal "Bom Futuro," Report of assistant field technician Marcos Carvalho Pereira. PUL, RDC, ADR PUL, Box 12, Area and Progress Reports, Folder 8, Document 10.
48. B. V. Worth to E. B. Hamill, October 13, 1943. NA, RG 234, Box 63.
49. M. A. Polli to J. A. Russell, "Report on Trip to Rubber Producing Area of the Rios Javary, Itecoaí, and Quixito," Manaus, September 1, 1942, NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Acre Territory (1944)—Amazonas (Juruá).
50. Merl G. Mayer and Antonio Aguiar de Souza, "Report of Field Trip on Lower Rio Acre," September 1943, PUL, RDC, ADR, Box 8, Miscellaneous Tech. Reports 5/9; Edward McLaughlin, American consul to sec. of state, Belém, May 22, 1943, "Necessity of Acquainting the People of the Amazon Valley with the Benefits Derived from Our Various Programs," NA, RG 84, Box 50. See translation of suggestions furnished W. N. Walmsley Jr. by Isaac Sabá, attachment to correspondence from S. M. McAshan Jr. to J. W. Bicknell, October 19, 1943, PUL, RDC, ADR, Box 3, Rubber Development Corporation, History and Organization, Folder 10, Doc. 1; "Summary of Amazon Valley Survey-April 9 to May 28, 1942 to Mr. Nelson A. Rockefeller, Coordinator, Inter-American Affairs from J. Caldwell King," PUL, RDC, ADR, Box 11, Folder 11.
51. G. R. Trimble Jr. and Milton Aguiar to C. Homer McDuff, "New Area Report on Central Solimões River (Jutaí River)," PUL, RDC, ADR, Box 10, Folder 7 Tech Reports-Trimble and Aguiar.

52. Paul B. Warner, field technician to H. J. Korkegi, general manager, Rio Division, May 23, 1944, NA, RG 234 Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Mato Grosso-São Salvador District.
53. D. H. Allen to Huntington Morse, asst. to the chairman, Maritime Commission, August 5, 1943, NA, RG 234, Box 32; W. N. Walmsley Jr., "Summary of Confidential Report of Messrs. Ryan and Caswell, Special Assistants to Mr. Jeffers, on the Brazilian Rubber Program," May 19, 1943, NA, RG 234, Box 71; Acre Territory Progress Report Number 2 on Rio Iaco by Francis C. Rebelo, associate field tech., August 31, 1945, PUL, RDC, ADR, Box 10, Technicians Report, Folder Technician Rebelo.
54. Samuel Benchimol, *Romanceiro da Batalha da Borracha* (Manaus: Imprensa Oficial, 1992), 51–62. In Chile, Klubock finds that married men were prone to militancy at U.S.-owned mines due to failed aspirations to bourgeois models of domesticity. See Thomas Miller Klubock, *Contested Communities: Class, Gender, and Politics in Chile's El Teniente Copper Mine, 1904–1951* (Durham: Duke University Press, 1998).
55. See Samuel Benchimol, *O cearense na Amazônia*, 76–77; "Rio Machado Field Trip," Report of Field Technicians William Green and Harry Haines and Asst. Field Technician Rubens Dickie, December 1944. PUL, RDC, ADR, Box 9, Folder Technicians' Report—William Green, Harry Haines, and Rubens Dickie.
56. "Aviso," *Alto Madeira*, October 29, 1942.
57. Sebastião Nilo Guerra to J. G. Araújo, Taperá, Rio Negro, August 19, 1943, MA, JGA, 1943.
58. Vale and Azancoth, *Cenário de Memórias: Movimento Teatral em Manaus, 1944–1968* (Manaus: Editora Valer/ Governo do Estado do Amazonas, 2001), 68; Peres, *Evocação de Manaus*, 52.
59. SESP, Completion Agreement Project AN-MAN-10, Malaria Control Draining in Manaus, State of Amazonas, Brazil, FIOC, SESP, Box 45, Folder 27.
60. "Coisas da região," *Alto Madeira*, June 28, 1942.
61. "Do seringal a casa de artesão," *Diário da Amazônia* (Porto Velho), November 8, 1988.
62. M. A. Polli to J. A. Russell, Report on Trip to Rubber Producing Area of the Rios Javary, Itecoaí, and Quixito.
63. Henrique de Oliveira Bastos to J. G. Araújo, Liberdade, November 25, 1942. MA, JGA, Box 1942.
64. Const. J. Alexopoulos and Herculano Caldeira Filho, "The Rio Curuça in the Municipality of Benjamin Constant," Report No. 4, October 22, 1944, PUL, RDC, ADR, Box 9 Technician Reports-Alexopoulos, 6/2; O. O. Koski and Antonio Aguiar de Souza, "New Area Report-Rio Iaco," PUL, RDC, ADR, Box 9 Tech Reports Koski and Antonio 6/7.
65. M. A. Polli to J. A. Russell, Report on Trip to Rubber Producing Area of the Rios Javary, Itecoaí, and Quixito.
66. Edward D. McLaughlin, American consul, to secretary of state, Belém, April 2,

1943, NA, RG 234, Box 63; Edward McLaughlin to sec. of state, Belém, June 2, 1943, NA, RG 234, Box 56.

67. B. V. Worth to John H. Neumann, Belém, February 7, 1944, NA, RG 234, Box 63.
68. R. B. Bogardus to D. Allen, June 18, 1943, NA, RG 234, RDC Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72.
69. Harry C. Haines, field technician, "Progress Report No. 1 Rio Javary-Alto Solimões Area," August 31, 1944, NA, RG 234 Records of the Reconstruction Finance Corporation [RFC], RDC, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Acre Territory (1944)—Amazonas (Juruá).
70. E. B. Hamill, senior field technician, to all field technicians, Comments on Mackinnon-Alexopoulos Reports, Manaus, July 20, 1943, PUL, RDC, ADR, Box 11, Progress and New Area Reports 8/11; Edward D. McLaughlin, American consul, Pará, October 5, 1943, "Rubber Program in Brazil," NA, RG 229, Box 1333; C. J. Alexopoulos, field technician to E. B. Hamill, "Increase of Rubber Production for War Needs in the Benjamin Constant Area," Benjamin Constant, June 28, 1943, PUL, RDC, ADR, Box 11, Progress and New Areas Reports 8/12; RDC, Monthly Report, Amazon Division, September 1944. NA, RG 234, Box 75.
71. Harry C. Haines, field technician, to C. Homer McDuff, general manager, Amazon Division. "Progress Report on Upper Solimões River," Benjamin Constant, January 30, 1945. PUL, RDC, ADR, Box 8, Technician Reports 3/12.
72. On policy options offering payments for environmental services, see Anthony Hall, "Paying for Environmental Services: The Case of Brazilian Amazonia," *Journal of International Development* 20, 7 (2008): 965–81.
73. Relatório do Reinaldo A. Reis tratando de exploração, comercialização, e contrabanda de borracha e abordando a situação dos seringueiros, April 24, 1943, FGV, GVC 1943.04.24.
74. George R. Trimble, associate field technician, and Milton de Aguiar, assistant field technician, to C. Homer McDuff, general manager, Amazon Division, Tefé, Amazonas, July 22, 1944. PUL, RDC, ADR, Box 10, Tech Reports-G. Trimble 7/3–6.
75. Gail Thomas and Ricardo Fróes, Rio Xingu Report. PUL, RDC, ADR, Box 10, Tech Reports-Gail Thomas 7/2.
76. C. Homer McDuff, general manager, Amazon Division, "Monthly Operating Report, Amazon Division, RDC, August 1944," NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Country Correspondence File, 1942–45, Brazil, Amazon Vicinity, Box 72.
77. "Bank of Brazil," December 9, 1942 [Instructions to Managers]. NA, RG 234, Box 38.
78. Relatório do Reinaldo A. Reis, April 24, 1943, FGV, GVC 1943.04.24. See also Banco de Crédito da Borracha, *Relatório 1944*.
79. Gelásio Barbosa de Melo and Fausto Pereira da Silva to Getúlio Vargas, Coari, August 15, 1943, AN, GCPR, Caixa 3826, File 616.
80. "Progress Report on Portel Area by Field Technician T. H. Becker," January 13, 1944. NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Devel-

opment Corporation-Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Amazonas Rio Madeiro [*sic*]-Pará.

81. Letter from Gustin to E. B. Hamill, senior technician, Manaus, Oct. 29, 1943. PUL, RDC, ADR, Box 9, Folder Reports on Areas-Harold E. Gustin.
82. Barros, *Nos Confins do Extremo Oeste*, 142.
83. G. R. Trimble and Milton de Aguiar, "Central Solimões Area-Rio Japurá Zone," May 1944, PUL, RDC, ADR, Box 10, Tech Report 9/9; George R. Trimble, associate field technician, and Milton de Aguiar, assistant field technician to C. Homer McDuff, general manager, Amazon Division, Tefé, Amazonas, July 22, 1944, PUL, RDC, ADR, Box 10, Tech Reports G. Trimble 7/3–6.
84. "Report on Field Trip on Rios Candeias and Jacy-Paraná by Merl C. Mayer, Field Technician, May 1943," PUL, RDC, ADR, Box 11, Folder 1, Area and Progress Report.
85. "Report of Seringal 'Minas Novas' Located Between Rio Candeias and Rio Branco," by Marcos Carvalho Pereira, assistant field technician, Feb. 8, 1944, PUL, RDC, ADR, Box 10, Folder Technician Reports Marcos Pereira.
86. "Informational Bulletin No. 7, June 15, 1943, Rubber Development Corp," by Everett G. Holt, PUL, RDC, ADR, Box 3, Folder RDC Information Bulletins.
87. E. B. Hamill to C. Homer McDuff, Manaus, November 16, 1944, PUL, RDC, ADR, Box 11, Folder 9, Area and Progress Reports.
88. Military Intelligence Service, "Situation Summary-Brazil," Washington, DC, March 7, 1945, NA, RG 218, Records of the U.S. Joint Chiefs of Staff Military Commission U.S.-Brazil BDC2200–2250 (Intelligence Estimates Brazil-General).
89. *Relatório da Diretoria da ACA, Ano Social de 1943*, 93.
90. *Boletim da ACA*, 3, 36 (July 1944): 20.
91. Luiz de Miranda Corrêa, *A Borracha da Amazônia e a II Guerra Mundial* (Manaus: Edições Governo do Estado do Amazonas, 1967), 125–26.
92. See testimony in *Anais da Assembléia Constituinte*, vol. 17 (June 27, 1946) (Rio de Janeiro: Departamento de Imprensa Nacional, 1949); and *Boletim da ACA* 4, 67 (February 1947): 17.
93. "Reconstrução," *Boletim da ACA* 5, 50 (September 1945): 7–8.
94. George H. Zentz, American vice consul, Manaus, to sec. of state, March 15, 1946, subject: Criticism Concerning the RDC in Amazonas. NA, RG 234, Box 56.
95. Valentim F. Bouças, *Estudos econômicos e financeiros: Meio Século de Trabalho*, Volume II (Rio de Janeiro: Edições Financeiras, 1953), 344.
96. Agnello Bittencourt, "Povoamento e navegação," *Boletim da ACA* 4, 48 (July 1945): 38.
97. Quoted in Willard Price, *The Amazing Amazon* (London: Vanguard, 1954), 255.
98. Hubert Maness, American vice consul to Ambassador Jefferson Caffery, Manaus, March 13, 1943, NA, RG 166, Box 92.
99. Hecht and Cockburn, *The Fate of the Forest*, 110.
100. Bouças, *Estudos econômicos e financeiros*, 344, 347, 363, 367; J. Cesário, "A espera do governo," *Alto Madeira*, April 18, 1946.
101. Teixeira de Mello, *Nordestinos na Amazônia*, 36.

102. Interview with João Monteiro de Souza, Manaus, August 2001.
103. My argument is informed here by Richard White, "'Are You an Environmentalist or Do You Work for a Living?': Work and Nature," in William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W.W. Norton, 1996), 171–85.
104. Dean, *Brazil and the Struggle for Rubber*, 104; J. Caldwell King to Nelson A. Rockefeller, coordinator of inter-American affairs, "Summary of Amazon Valley Survey, April 9 to May 28, 1942"; Esther F. Phipard, food economist, to George P. Doherty, Rubber Division, Board of Economic Warfare, Sept 12, 1942. NA, RG 229, Box 1681.
105. Nancy Leys Stepan, "The Only Serious Terror in These Regions: Malaria Control in the Brazilian Amazon," in Diego Armus, ed., *Disease in the History of Modern Latin America: From Malaria to AIDS* (Durham: Duke University Press, 2003), 26–40; Campos, *Políticas internacionais de saúde*, 87–88, 98, 128; Cueto, *The Return of Epidemics*, 84–85.
106. Cueto, *The Return of Epidemics*, 1.
107. Stepan, "Malaria Control in the Brazilian Amazon," 39; Leonidas M. Deane, "Malaria Vectors in Brazil," *Memórias do Instituto Oswaldo Cruz*, Vol. 81 (1986): 5–14.
108. Campos, *Políticas internacionais de saúde*, 94; and E. H. Christopherson, chief of party, Health and Sanitation Program in Brazil, Rio de Janeiro, April 11, 1945. NA, RG 229, Office of Inter-American Affairs, Records of Department of Basic Economy: Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, August–November 1944; Dr. B. McD. Krug to Towend Munson, Rio de Janeiro, May 19, 1943. NA, RG 229, Box 1333.
109. SESP, Final Summary and Completion Agreement, Project-AM-PVE-4-Operation of Health Center, Porto Velho, Guaporé Territory, December 15, 1950; "Projeto de Porto Velho," January 1945, SESP and Brazilian Field Party of Institute of Inter-American Affairs, Operation of Health Center in Porto Velho, Territory of Guaporé, March 2, 1945; SESP, Distrito de Porto Velho, Relatório de Informações Básicas. 1943, FIOC, all in SESP, Box 18, Folder 7.
110. Deane, "Malaria Vectors in Brazil," 5–14; and Stepan, "Malaria Control in the Brazilian Amazon," 39; Conference Memorandum, March 31, 1943, John C. Geyer (CIAA) and John D. Farnham, Re: Atabrine; Newton de Menezes Vieralves to K. C. Waddell, Belém, February 13, 1943 NA, RG 234, Box 61; Lewis H. Weed, chairman, Division of Medical Sciences, National Research Council, The Critical Antimalarial Problem and Its Solution, February 1, 1943, NA, RG 234, Box 61.
111. Campos, *Políticas internacionais de saúde*, 119–21.
112. E. H. Christopherson, chief of party, Health and Sanitation Program in Brazil, Rio de Janeiro, April 11, 1945, NA, RG 229, Office of Inter-American Affairs, Records of the Department of Basic Economy: Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, January–August 1944; Institute of Inter-American Affairs, Division of Health and Sanitation, Brazilian Field Party, Report for the Year 1943, NA, RG 229, Box 1334.

113. See SESP, Final Summary and Conclusion Agreement of Project AM-UAU-4 (Operation of Health Center, Uaupés, Amazonas, 15 December, 1950). FIOC, SESP, Box 21, Folder 28; S. M. McAshan Jr. to Dr. K. C. Waddell, November 19, 1943, NA, RG 234, Box 61; Report No. 3 on the Acre Territory—Upper Rio Acre by field technician O. O. Koski. 9/6/ 43, PUL, RDC, ADR, Box 8. Folder Technicians Report no 4. E. H. Christopherson, chief of field party, Brazil, to Rubber Development Corporation, Office of the Field Technicians, Belém, September 14, 1943, NA, RG 234, Box 61.
114. Lewis H. Weed, chairman, Division of Medical Sciences, National Research Council, The Critical Antimalarial Problem and Its Solution, February 1, 1943, NA, RG 234, Box 61; Memo from Harry C. Haines to C. Homer McDuff, Alto Solimões, November 20, 1944, PUL, RDC, ADR, Box 11, Folder 3 Progress and Area Reports.
115. New Area Report on Upper Solimões Region: Rio Itecoarí and Affluents-Rio Branco and Rio das Pedras by Constantine J. Alexopoulos and Herculano Caldeira Filho, March 25, 1944, PUL, RDC, ADR, Box 9, Folder Technicians Report Alexopoulos Herculano Caldeira Filho; C. B. Manifold to Henry Linam, "Summary of Progress Report on Lower Tapajóz-River, Brazil," August 2, 1943. NA, RG 234, Box 32; SESP, Mes de Novembro de 1945, Distrito de Rio Branco, AM-RBR-4; SESP, Mes de Julho de 1945, Distrito de Rio Branco, AM-RBR-4, FIOC, SESP, Box 18, Folder 6; "Memo from Harry C. Haines to C. Homer McDuff, Alto Solimões, November 20, 1944," PUL, RDC, ADR, Box 11, Folder 3; "Progress and Area Reports; Progress Report #2 on Rio Jandiatuba, Mun. of São Paulo de Olivença, Alto Solimões, AM" by J. A. Sequeira e Silva to C. Homer McDuff, Benjamin Constant, AM, Sept. 4, 1945, PUL, RDC, ADR, Box 10, Folder Technicians Report-J.A. Sequeira e Silva.
116. Campos, *Políticas internacionais de saúde*, 93–96; Report No. 3 on the Acre Territory—Upper Rio Acre by field technician O. O. Koski. 9/6/ 43, PUL, RDC, ADR, Box 8, Folder Technicians Report no 4.
117. Campos, *Políticas internacionais de saúde*, 121.
118. SESP, Final Summary and Completion Agreement, Project-AM-PVE-4-Operation of Health Center, Porto Velho, Guaporé Territory, December 15, 1950, FIOC, SESP, Box 18, Folder 7.
119. Division of Health and Sanitation and Serviço Especial de Saúde Pública Thirteenth Weekly Meeting, October 18, 1943, NA, RG 229, Box 1334.
120. Campos, *Políticas internacionais de saúde*, 114.
121. SESP, Final Summary and Completion Agreement, Project-AM-PVE-4-Operation of Health Center, Porto Velho, Guaporé Territory, December 15, 1950; "Projeto de Porto Velho," January 1945, SESP and Brazilian Field Party of Institute of Inter-American Affairs, Operation of Health Center in Porto Velho, Territory of Guaporé, March 2, 1945; SESP, Distrito de Porto Velho, Relatório de Informações Básicas, 1943, all in FIOC, SESP, Box 18, Folder 7.
122. José Alfredo Leite Araújo to Getúlio Vargas, Rio de Janeiro, July 15, 1944, AN, GCPR, Box 3885, Proc 25077.

123. Alcino Teixeira de Mello, *Nordestinos na Amazônia* (Instituto Nacional de Imigração e Colonização, 1956), 94, 103–4.
124. http://revistaepoca.globo.com/Epoca/0,6993,EPT703947–1664–1,00.html. Accessed June 2009.
125. Processos Criminais, Comarca Guajará Mirim, Caixa 100, Proc. 65/1944. CDH-TJR.
126. "Progress Report No. 1 Alto Rio Purus in Amazonas and Acre Territory Brazil," by Frederick H. Vogel, asst. field technician, Sena Madureira, Acre, July 3, 1944, PUL, RDC, ADR, Box 10, Folder Technician Report Vogel.
127. Memo from Francis C. Rebelo to C. Homer McDuff, Sena Madureira, Acre, June 11, 1945, PUL, RDC, ADR, Box 10, Technician Report Francis C. Rebelo.
128. Hamill, "Report No. 3 on the Acre Territory-Upper Rio Acre," Manaus, Sept. 9, 1943. PUL, RDC, ADR, Box 8, Folder Technicians Report no. 4.
129. Memo from Harold E. Gustin to C. Homer McDuff, Rio Negro, AM, Sept. 29, 1944. PUL, RDC, ADR, Box 9, Technicians Reports.
130. B.V. Worth to Carl L. Reed, February 3, 1944, NA, RG 234, Box 63.
131. Lupércio Freire Maia, quoted in Paula Mageste, "Exército da Borracha," March 29, 2004, http://revistaepoca.globo.com/Epoca/0,6993,EPT703947–1664–1,00.html. Accessed June 2009.
132. Georges S. Rabinovitch, labor advisor, to Reed M. Chambers, vice president, RDC, Rio de Janeiro, May 25, 1943, NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72; Charles J. Maki and George E. Hafstad, "Report on Rio Juruá-Tarauacá Watershed," November 1, 1943, PUL, RDC, ADR, Box 8, Miscellaneous Technicians' Report. Emphasis in original.
133. *Boletim da* ACA, 3, 36 (July 1944): 20.
134. Antonio Carolino to Alfredo Marques de Silveira, Seringal Maranian, Rio Juruá, Caruarí, June 20, 1944. ACA, Box 3, Folder 3.1.
135. Atilio Nery to ACA, Boca do Acre, June 27, 1944. ACA, Box 3, Folder 3.1.
136. Mayor Nelson Noronha to ACA, Benjamin Constant, March 3, 1944, and June 2, 1944. ACA, Box 3, Folder 3.1.
137. Quoted in Wolff, *Mulheres da Floresta*, 138.
138. Interview with Otávio Carlos Monteiro, Manaus, July 2001.
139. In 2007, the Globo network featured a four-month mini-series of historical fiction written by Glória Perez titled *Amazônia: de Galvez a Chico Mendes*, which explored the history of Acre, with a focus on the rubber trade. http://memoriaglobo.globo.com/Memoriaglobo/0,27723,GYN0–5273–247838,00.html. Accessed July 2010.
140. O. O. Koski, Report No. 3 on the Acre Territory, Upper Rio Acre, September 6, 1943, PUL, RDC, ADR, Box 8, Technicians Report No. 4.
141. Harold E. Gustin, Account of Daily Activities for Month of July 1943, PUL, RDC, ADR, Box 8, Technician's Report No. 1.
142. Hamill, "Report No. 3 on the Acre Territory, Upper Rio Acre," Manaus, Sept. 9, 1943. PUL, PHW, Box 8, Folder Technicians Report no 4.

143. Capt. Oscar Passos to Getúlio Vargas, Rio Branco, April 15, 1942, AN, GCPR, Caixa 388 Proc 10423; see also translation of article in enclosure of Jay Walker, American consul, to secretary of state, Pará, March 9, 1942, NA, RG 166, Box 62.
144. Benchimol, *O cearense*, 38.
145. Edward D. McLaughlin, American consul, to secretary of state, Belém, April 2, 1943, NA, RG 234, Box 63.
146. José Carlos Ribeiro, Relatório de 1943, SESP, Projeto de Migração, NA, RG 229, Office of Inter-American Affairs, Records of the Department of Basic Economy, Health and Sanitation Division, Monthly Progress Reports of Field Party (E-143), Brazil, March–Dec. 1943.
147. E. G. Holt to D. H. Allen, "Brazilian Labor Movement to Amazon," August 17, 1944, NA, RG 234, Box 63.
148. Relatório do Reinaldo A. Reis, April 24, 1943, FGV, GVC 1943.04.24.
149. Relatório do Reinaldo A. Reis; Charles Wagley to Dr. George M. Saunders, "Labor Immigration," June 15, 1942, NA, RG 229, Office of Inter-American Affairs, Records of Department of Basic Economy: Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143), Brazil, Jan. 1942–Feb. 1943.
150. "Progress Report on Rio Tapajós by Field Technician Report F, Bruce Lamb and Asst. Field Technician Mohacyr B. de Mello, December 4 to 22, 1943," PUL, RDC, ADR, Box 9, Folder Technician Report F, Bruce Lamb.
151. Charles Wagley to Kenneth Waddell, Labor Immigration from Northeastern Brazil, September 1, 1942, Attachment to Report of Chief of Field Party, August 15–September 30, 1942, NA, RG 229, Office of Inter-American Affairs, Records of Department of Basic Economy: Health and Sanitation Division, Monthly Progress Reports of Field Parties (E-143) Brazil, Jan. 1942–Feb. 1943.
152. Alcino Teixeira de Mello, *Nordestinos na Amazônia* (Instituto Nacional de Imigração e Colonização, 1956), 118.
153. Fleming MacLiesh and Cushman Reynolds, *Strategy of the Americas* (New York: Duell, Sloan and Pearce, 1941), 65; "Chega a Belém a Senhora Roosevelt," *Alto Madeira*, March 16, 1944.
154. Antonio Cantanhede, *Achegas para a história de Porto Velho* (Manaus: Seção de Artes Gráficas da Escola Técnica de Manaus, 1950), 238.
155. Lúcio Albuquerque, "Mariano, o que queria ir para a guerra e acabou na guarda," *Alto Madeira*, 5 June 1991.
156. Edward McLaughlin, American consul, to sec. of state, Belém, May 20, 1943, "Meeting Held at Consulate on May 19 Discussing Labor Problem in the Amazon Valley." NA, RG 84, Box 50.
157. Edward D. McLaughlin, American consul, to secretary of state, Pará, June 2, 1943, NA, RG 234, Box 56.
158. Walter J. Donnelly, counselor of embassy for economic affairs, "Report of the Rubber Development Program in the Amazon Valley," American Embassy, RJ, June 5, 1943. NA, RG 229, Box 1333.
159. B. O. Clifton Riley, Rubber Development Corp., Weekly Report No. 37, May 1, 1943, NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Develop-

ment Corporation-Country Correspondence File, 1942–45, Brazil, Rio Vicinity, Box 72.

160. See Benchimol, *O cearense na Amazonia*, 72–74; Milton Hatoum, *The Brothers*, trans. John Gledson (New York: Farrar, Straus and Giroux, 2002), 160.
161. Chester J. Ordon to Dr. Antunes, Report on the Porto Velho Concrete Plant, Porto Velho, January 5, 1945, FIOC, SESP, Box 43, Folder 1; SESP, Construction of Privies, Porto Velho, Federal Territory of Guaporé, Suplemento No. 1, November 5, 1945, FIOC, SESP, Box 43, Folder 3.
162. Dirceu Lino de Mattos, "Impressões de uma viagem à zona Bragantina do Pará," *Boletim Paulista de Geografia* 30 (1958): 38–62.
163. Nilo Oliveira Vellozo, *Rumo ao Desconhecido* (n.d., n.p), 11.
164. Mello, *Nordestinos na Amazônia*, 101; José Graça to president of ACA, May 3, 1946. ACA, Box 10, Pasta 10.3.
165. Acordo Celebrado Entre a Superintendência do Abastecimento do Vale Amazônico e a Rubber Development Corporation para Recebimento e Colocação de Trabalhadores no Vale Amazônico, AN, AP50, Caixa 4, Doc. 14.
166. Secreto, *Soldados da borracha*, 97–98.
167. Jovelina Luciana de Souza and others to Getúlio Vargas, Mossoró, June 20, 1944; José Maciel Luz, Parecer da Auditoria Jurídica da C.A.E.T.A., Fortaleza, November 30, 1944. AN, GCPR, Caixa 3900, File 31896.
168. José Maciel Luz, Parecer da Auditoria Jurídica da C.A.E.T.A., Fortaleza, 30 November 1944. AN, GCPR, Caixa 3900, File 31896.
169. Bouças, *Estudos econômicos e financeiros*, 331.
170. Olivio Brito de Sá to president of ACA, Urucurituba, June 13, 1944; Antonio Carolino to Mayor Alfredo Marques de Silveira.
171. Arlinda Lopes da Costa to Jaime de Araújo, president of ACA, Urucará, October 30, 1947. ACA, Caixa 3, Pasta 3.1. Emphasis in original.
172. Souza, "(Des) Ordem na Fronteira," 114.
173. Col. Luis Silvestre Gomes Coelho to José da Gama Malcher, president of BCB, Rio Branco, August 8, 1944. AN, GCPR, Box 3875, Proc. 21200.
174. Letter from Francisco Praia and João Valério to Getúlio Vargas, Seringal Paraguassu, Município de Brasiléia, Acre, May 10, 1944, AN, GCPR, Box 3876, Proc. 21727; J. G. Araújo & Cia, Aviados Do Rio Purus e Seus Afluentes, Enclosure to letter from J. G. Araújo & Cia. to Banco de Crédito da Borracha, Manaus, May 17, 1944, MA, JGA, 1944; and O. O. Koski and Antonio Aguiar de Souza, "New Area Report, Rio Iaco," PUL, RDC, ADR, Box 9, Tech Reports Koski and Antonio 6/7.
175. J. G. Araújo to Banco de Crédito da Borracha, Manaus, November 4, 1944, MA, JGA, 1944.
176. See correspondence from José Malcher, president of BCB, to Ovídio Menezes Gil, Ministério da Fazenda, Belém, August 23, 1944 and December 11, 1944. AN, GCPR, Box 3876, Proc. 21727.
177. Franklin Bradshaw to H. J. Korkegi, Special Report on Sociedade Comercial Latex do Brasil located in interior of Mato Grosso, operated by Messrs. A. Bich-

weitz and W. Gzergorzewski, April 24, 1944. NA, RG 234, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Mato Grosso-São Salvador District.

178. Paul B. Warner, field technician, to H. J. Korkegi, general manager, RDC, Cuiabá, September 15, 1944. NA, RG 234, Reports Relating to Rubber Development in Latin America, 1942–45, Brazil: Fortaleza District.
179. Processos Cíveis, Comarca de Guajará-Mirim, Caixa 96, Proc. 035/1948, CDH-TJR.
180. For Latin America, see the argument by Greg Grandin in *The Last Colonial Massacre: Latin America in the Cold War* (Chicago: University of Chicago Press, 2004). For the wartime impact on U.S. advocates of internationalism, see Elizabeth Bogwardt, *A New Deal for the World: America's Vision for Human Rights* (Cambridge: Belknap Press of Harvard University Press, 2005).
181. Processos Cíveis, Guajará-Mirim, Caixa 012, Proc. 009/1950, CDH-TJR.
182. Processos Cíveis, Comarca de Guajará-Mirim, Caixa 46, Proc. 004/1949, CDH-TJR.
183. Processos Cíveis, Comarca de Guajará-Mirim, Caixa 016, Proc. 030/1948, CDH-TJR.
184. Wolff, *Mulheres da floresta*, 250–52.
185. Relatório de Reinaldo Reis, April 24, 1943. FGV, CPDOC, Arquivo Getúlio Vargas, GVC 1943.04.24.
186. "Algumas histórias dos soldados da borracha," *A Tribuna* (Porto Velho), January 11–12, 1981.
187. Mello, *Nordestinos na Amazônia*, 129.
188. B. V. Worth to E. B. Hamill, October 13, 1943. NA, RG 234, Box 63.
189. Welch, *The Seed Was Planted*, 64–65.
190. *Diário do Congresso Nacional*, Ano 1, No. 3, September 26, 1946, 37–38.
191. Luiz Fernando Maria Teixeira, "O desajuste e a recuperação do trabalho rural," *Revista de Imigração e Colonização* 11, 2 (1950): 263–68.
192. Martinello, *A "batalha da borracha,"* 337–39.
193. Corrêa, "BASA," 556–57.
194. Verse reprinted in Walmir de Albuquerque Barbosa, *O Cordel na Amazônia* (Manaus: Editora da Universidade do Amazonas, 1996), 29.
195. Aluízio Ferreira to Getúlio Vargas, Rio de Janeiro, January 12, 1944, CDHER, AF, Correspondência, Box 120.
196. Coordenação de Mobilização Econômica, Gabinete do Coordenador, "Bases para a elaboração de um programa Amazônico," [n.d.], AN, PAR, Box 4, Doc. 17; "O seringueiro, soldado anônimo desta guerra," *Diretrizes*, April 8, 1943.
197. Russ Symontowne, "Rubber Deal With Brazil Proves Failure, U.S. Agency Reverses Original Program," *Daily News* (NY), November 16, 1943. By 1941, Brazil produced domestically 441,800 tires, and in foreign trade, the export of rubber tires and inner tubes rose from 1 million cruzeiros in 1941 to 187 million cruzeiros in 1943. See Hunnicutt, *Brazil: World Frontier*, 103.
198. Luiz Osiris da Silva, "Tres capítulos importantes de história do BASA," in Mendes, ed., *Amazônia*, 618–19.

199. See Erb, "Prelude to Point Four," 261–63; and SESP, Guarda Training School in Itacoatiara, Amazonas, April 8, 1944, FIOC, SESP. Box 10, Folder 2.
200. Stepan, "Malaria Control in the Brazilian Amazon," 45.
201. Campos, *Políticas internacionais de saúde*, 231.
202. Agreement to Which Decree-Law No. 5,813 Applies, translation of Portuguese original that appeared in Diário Oficial, Rio de Janeiro, September 16, 1943. NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil: Rio Vicinity, Box 72; Edward D. McLaughlin, American Consul, to Secretary of State, Belém, March 8, 1943, NA, RG 234, Box 56; S. M. McAshan Jr., to W. L. Clayton, April 14, 1943, NA, RG 234, Records of the Reconstruction Finance Corporation [RFC], RDC, Country Correspondence File, 1942–45, Brazil: Amazon Vicinity, Box 72.
203. Harold S. Tewell, first sec. of embassy to sec. of state, RJ, January 11, 1945, Subject: Completion of Rubber Migration Program. NA, RG 234, Box 56.
204. See D. H. Allen to Carl Sylvester, consultant, RDC, July 13, 1944. NA, RG 234, Box 63; telegram from P. H. Williams to Allen, Manaus, June 5, 1944. NA, RG 234, Records of the Reconstruction Finance Corp.-Rubber Development Corporation-Country Correspondence File, 1942–45, Brazil: Amazon Vicinity, Box 72.
205. João Alberto de Lins Barros, "Descrição Geral," n.d., FGV, JA, JA .ap.pfbc.1946.01.12.
206. Paulo de Assis Ribeiro to Vera Assis Ribeiro, November 9, 1943. AN, PAR, Caixa 5, Doc. 38; Letter from Delegado da FBC do Norte to João Alberto, Belém, October 25, 1944. FGV, JA. ap.pfbc.1944.04.19; Banco de Crédito da Borracha, *Relatório 1945*, 17.
207. Edward D. McLaughlin, Special Report on Rubber Development Corporation's Organization and Liquidation, January 31, 1946. NA, RG 234, Central File 1942–1949, Brazil, Reports from Jan. 1948 thru Brazil Monthly Reports, 1945–1946; Memo from Reed M. Chambers to Jefferson Caffery, August 17, 1942, NA, RG 234, Box 35; D. H. Allen, "Proposed Supplementary Airplane Services in the Amazon Basin and to the Amazon Basin Designed to Facilitate the Production of Rubber," July 31, 1942. NA, RG 234, Box 35.
208. General Borges Fortes de Oliveira to president, March 28, 1950, Rio de Janeiro. FGV, JA, JA.ap.pfbc.1946.01.12.
209. João Alberto de Lins Barros, "Descrição Geral," n.d., FGV, JA, JA .ap.pfbc.1946.01.12.
210. Dulphe Pinheiro Machado, "Relatório de uma viagem de inspeção através do nordeste em maio de 1942," *Revista de Imigração e Colonização* 3, 2 (August 1942): 40.
211. Christovam Leite de Castro, secretaria geral, Conselho Nacional de Geografia to Ministro João Alberto Lins de Barros, Rio de Janeiro, July 18, 1946. FGV, JA, JA. cp.pfbc.1944.04.19.
212. Benjamin H. Hunnicutt, *Brazil Looks Forward* (Rio de Janeiro: IBGE, 1945), 36–37.
213. William MacKinnon to John H. Neumann, general field manager Amazon

Division, n.d. ["Progress report on Afuá Municipality"], PUL, RDC, ADR, Box 11, Folder 11.

214. "Progress Report No. 1 Alto Rio Purus in Amazonas and Acre Territory Brazil by Frederick H. Vogel, Assct Field Technician," Sena Madureira, Acre, July 3, 1944, PUL, RDC, ADR, Box 10, Folder Technician Report Vogel.

Epilogue

1. Ans Kolk, *Forests in International Environmental Politics: International Organisations, NGOs, and the Brazilian Amazon* (Utrecht: International Books, 1996), 79–81.
2. David Cleary, "Extractivists, Indigenes, and Protected Areas: Science and Conservation Policy in the Amazon," in Anthony Hall, ed., *Global Impact, Local Action: New Environmental Policy in Latin America (*London: Institute for the Study of the Americas, 2005), 199.
3. See Helen Collinson, ed., *Green Guerrillas: Environmental Conflicts and Initiatives in Latin America and the Caribbean* (Nottingham: Russell Press, 1996).
4. Slater, *Entangled Edens*, 137–39.
5. See Hecht and Cockburn, *The Fate of the Forest*, 55–72.
6. See Margaret E. Keck, "Social Equity and Environmental Politics in Brazil: Lessons from the Rubber Tappers of Acre," *Comparative Politics* 27, 4 (July 1995): 409–24; Elizabeth Dore, "Capitalism and Ecological Crisis: Legacy of the 1980s," in Collinson, ed., *Green Guerrillas*, 8–19. On environmentalism as a "vocabulary of protest" for the poor, see Ramachandra Guha and Juan Martínez-Allier, *Varieties of Environmentalism: Essays North and South* (London: Earthscan Publications, 1997). On the origins and impact of environmentalism in the Amazon, see Ricardo Azambuja Arnt and Stephan Schwartzman, *Um artifício orgânico: transição na Amazônia e ambientalismo, 1985–1990* (Rio de Janeiro: Rocco, 1992).
7. See Antonio Carlos Diegues, *O mito moderno da natureza intocada*, 5th ed. (São Paulo: Hucitec; NUPAUB/USP, 2004).
8. See Hecht and Cockburn, *The Fate of the Forest*; Dennis Mahar, *Frontier Development Policy in Brazil: A Study of Amazonia* (New York: Praeger, 1979); Marianne Schmink and Charles H. Wood, eds., *Frontier Expansion in Amazonia* (Gainesville: University of Florida Press, 1984).
9. See Hecht and Cockburn, *The Fate of the Forest*; Dennis Mahar, *Frontier Development Policy in Brazil: A Study of Amazonia* (New York: Praeger, 1979); Marianne Schmink and Charles H. Wood, eds., *Frontier Expansion in Amazonia* (Gainesville: University of Florida Press, 1984).
10. Environmental Law Institute, *Brazil's Extractive Reserves: Fundamental Aspects of Their Implementation* (Washington, DC: ELI, 1992), 14n8.
11. See Anna Luiza Ozorio de Almeida, *The Colonization of the Amazon, 1970–1980* (Austin: University of Texas Press, 1992), 29, 92.; Hervé Théry, "New Frontiers in the Amazon," in Hall, ed., *Global Impact, Local Action*, 65.
12. David Goodman and Anthony Hall, "Introduction," in Goodman and Hall, eds.,

The Future of Amazonia: Destruction or Sustainable Development (New York: St. Martin's Press, 1990), 10.

13. Ans Kolk, *Forests in International Environmental Politics: International Organisations, NGOs, and the Brazilian Amazon* (Utrecht: International Books, 1996), 72–75; London and Kelly, *The Last Forest*, 147, 179.
14. Hecht and Cockburn, *Fate of the Forest*, 54.
15. Kolk, *Forests in International Environmental Politics*, 79–81.
16. Shawn William Miller, *Fruitless Trees: Portuguese Conservation and Brazil's Colonial Timber* (Stanford: Stanford University Press, 2000).
17. Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600–1860* (Cambridge: Cambridge University Press, 1996).
18. Margaret E. Keck and Kathryn Sikkink, *Activists beyond Borders: Advocacy Networks in International Politics* (Ithaca: Cornell University Press, 1998), 133–35.
19. Keck, "Social Equity," 409–24.
20. See Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge: Cambridge University Press, 1977), 339–48; and John McCormick, *Reclaiming Paradise: The Global Environmental Movement* (Bloomington and Indianapolis: Indiana University Press, 1989).
21. See Simon Schama, *Landscape and Memory* (New York: Columbia University Press, 1996).
22. Mary Douglas and Aaron Wildavsky, *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* (Berkeley: University of California Press, 1982), 157–64.
23. Douglas and Wildavsky, *Risk and Culture*, 157–64; Eduardo Viola, "O movimento ecológico no Brasil (1974–1986): Do ambientalismo à ecopolítica," in Pádua, *Ecologia e Política no Brasil*, 68–70.
24. On the relationship between the automobile and conservationism, see Paul S. Sutter, *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002).
25. Peter Thompson, "New Age Mysticism, Postmodernism and Human Liberation," in Colin Riordan, ed., *Green Thought in German Culture: Historical and Contemporary Perspectives* (Cardiff: University of Wales Press, 1997), 112.
26. Keck and Sikkink, *Activists beyond Borders*, 10–11, 128.
27. Viola, "O Movimento Ecológico no Brasil," 108.
28. Marianne Schmink, "Amazonian Resistance Movements," in Kosinski, ed., *Ecological Disorder in Amazonia*, 157.
29. Cleary, "Extractivists, Indigenes, and Protected Areas," 203–4.
30. See Anthony Hall, "Environment and Development in Brazilian Amazonia: From Protectionism to Productive Conservation," in Hall, ed., *Amazonia at the Crossroads: The Challenge of Sustainable Development* (London: Institute of Latin-American Studies, 2000), 102.
31. For an overview, see Kolk, *Forests in International Environmental Politics*; Luiz C. Barbosa, *The Brazilian Amazon Rainforest: Global Ecopolitics, Development, and*

Democracy (Lanham, MD: University Press of America, 2000). For British NGOs, see Andréa Zhouri, "Árvores e gente no ativismo transnacional: As dimensões social e ambiental na perspectiva dos campaigners britânicos pela Floresta Amazônica," *Revista de Antropologia* 44, 1 (2001): 9–52.

32. Stephan Schwartzman, "Protecting the Amazon Rainforest, a Global Resource," *Environmental Defense Fund Letter* 20, 1 (February 1989): 7.
33. See Slater, *Entangled Edens*; Stepan, *Picturing Tropical Nature*.
34. Laura Rival, "Trees, from Symbols of Life and Regeneration to Political Artefacts," in Laura Rival, ed., *The Social Life of Trees: Anthropological Perspectives on Tree Symbolism* (Oxford and New York: Berg, 1998); and Angie Zelter "Grassroots Campaigning for the World's Forests," in Rival, *The Social Life of Trees*.
35. Latour, *Politics of Nature*, 21.
36. Shawn William Miller, *An Environmental History of Latin America* (Cambridge: Cambridge University Press, 2007), 194.
37. Eduardo Gudynas, "The Fallacy of Ecomessianism: Observations from Latin America," in Wolfgang Sachs, ed., *Global Ecology: A New Arena of Political Conflict* (London; Atlantic Highlands, N.J.: Zed Books; Halifax, Nova Scotia: Fernwood, 1993), 171. Setzer quoted in Andrew Revkin, *The Burning Season: The Murder of Chico Mendes and the Fight for the Amazon Rain Forest* (Boston: Houghton Mifflin, 1990), 236.
38. Bertha K. Becker, *Amazônia* (São Paulo: Editora Atica, 1990), 88–92.
39. Roger D. Stone, *Dreams of Amazonia* (New York: Penguin Books, 1986), 149.
40. Ariel E. Lugo, "H. T. Odum and the Luquillo Experimental Forest," *Ecological Modeling* 178 (2004): 65–74; Hecht and Cockburn, *The Fate of the Forest*, 41.
41. Becker, *Amazônia*, 88–92.
42. David Takacs, *The Idea of Biodiversity: Philosophies of Paradise* (Baltimore: Johns Hopkins University Press, 1996), 37–83. See a related discussion on biodiversity discourses regarding Colombia's Pacific region in Escobar, *Territories of Difference*, 138–45.
43. Spencer Weart, *The Discovery of Global Warming*, 20–38, 110.
44. Weart, *Discovery*, 116, 142–60.
45. Fearnside, "Global Implications," 36.
46. Kolk, *Forests in International Environmental Politics*, 84.
47. Escobar, *Encountering Development*, 212.
48. Fearnside, "Global Implications," 45–51.
49. See Mary Allegretti, "Extractive Reserves: An Alternative for Reconciling Development and Environmental Conservation in Amazonia," in Anthony Anderson, ed., *Alternatives to Deforestation: Steps Towards Sustainable Use of the Amazon Rainforest* (New York: Columbia University Press, 1990), 255.
50. Keck, "Social Equity," 413.
51. Anthony Hall, *Sustaining Amazonia* (Manchester: Manchester University Press, 1997), 97.
52. Chico Mendes, *Fight for the Forest: Chico Mendes in His Own Words* (New York: Monthly Review Press, 1992), 81. See also Revkin, *The Burning Season*.

53. Hecht and Cockburn, *The Fate of the Forest*, 207–8, 262–63; Bruce Rich, *Mortgaging the Earth: The World Bank, Environmental Impoverishment, and the Crisis of Development* (Boston: Beacon Press, 1994), 129.
54. Mauro Barbosa de Almeida, "The Politics of Amazonian Conservation," *Journal of Latin American Anthropology* 7, 1 (March 2002): 187–88.
55. "Hino do seringueiro," excerpted from Patricia Shanley and Gabriel Medina, eds., *Frutíferas e plantas úteis da vida amazônica* (Belém: CIFOR and IMAZON, 2005), 284.
56. See Kent H. Redford, "The Ecologically Noble Savage," *Orion Nature Quarterly* 9, 3 (1990): 24–29; Douglas J. Buege, "The Ecologically Noble Savage Revisited," *Environmental Ethics* 18, 1 (Spring 1986): 71–88; Larry Lohmann, "Green Orientalism," *The Ecologist* 23, no. 6 (1993), 202–4. For an overview of the debate, see Kay Milton, *Environmentalism and Cultural Theory* (London: Routledge, 1996), especially chapters 4 and 6.
57. See Stephen Nugent, *Amazonian Caboclo Society: An Essay on Invisibility and Peasant Economy* (Providence, RI; Oxford: Berg, 1993). On "legitimacy" in Amazonian political discourse, see Conklin, "Body Paint, Feathers, and VCRs," 711–37.
58. For a compelling critique of cultural essentialism, see Serge Gruzinski, *O pensamento mestiço*, trans. Rosa Freire d'Aguiar (São Paulo: Companhia das Letras, 2001) and particularly his section on the Amazon, 23–38.
59. See Almeida, "The Politics of Amazonian Conservation," 170–219.
60. See Keck and Sikkink, *Activists beyond Borders*, 137–39; Rich, *Mortgaging the Earth*, 108–27.
61. Keck, "Social Equity," 409–24.
62. Goodman and Hall, introduction to *The Future of Amazonia*, 14–15.
63. Quoted in Rich, *Mortgaging the Earth*, 130.
64. Manuela Carneiro da Cunha and Mauro W. B. de Almeida, "Indigenous People, Traditional People, and Conservation in the Amazon," *Daedalus* 129, 2 (2000): 322.
65. Environmental Law Institute, *Brazil's Extractive Reserves*, 11–31.
66. Allegretti, "Extractive Reserves," 257–58; Manuela Carneiro da Cunha and Mauro W. Barbosa de Almeida, "Populações tradicionais e conservação ambiental," in João P. R. Capobianco et al., eds., *Biodiversidade Amazônica—Avaliação e Ações Prioritárias para a Conservação, Uso Sustentável e Repartição de Benefícios* (São Paulo: Instituto Socioambiental, 2001), 184n1.
67. Environmental Law Institute, *Brazil's Extractive Reserves*, 11–31.
68. On conditions on the extractive reserves, see *Brazil's Extractive Reserves*, 46–47; Anthony Hall, "Did Chico Mendes Die in Vain? Brazilian Rubber Tappers in the 1990s," in Collinson, ed., *Green Guerrillas*, 97; London and Kelly, *The Last Forest*, 125–27.
69. Roger Chartier, *Forms and Meanings: Texts, Performances, and Audiences from Codex to Computer* (Philadelphia: University of Pennsylvania Press, 1995), 96.
70. Scientist S. Fred Singer, quoted in Matthew Patterson, *Global Warming and Global Politics* (London and New York: Routledge, 1996), 2.
71. See the discussion in Fearnside, "Global Implications."

BIBLIOGRAPHY

Archives

BRAZIL

Belém, PA
- Arquivo Público do Estado do Pará (APEP)
- Biblioteca do Banco da Amazônia (BASA)
- Biblioteca Arthur Vianna (BAV)

Fortaleza, C.E.
- Arquivo Público do Estado do Ceará (APEC)
- Biblioteca Pública Governador Menezes Pimentel (BPMP)
- Museu de Arte da Universidade Federal do Ceará (MAUC)
- Jean-Pierre Chabloz Papers
- Regina Chabloz Papers
- Limoeiro do Norte, C.E.
- Arquivo da Diocese de Limoeiro (ADL)

Manaus, AM
- Arquivo da Associação Comercial do Amazonas (ACA)
- Instituto Histórico e Geográfico do Amazonas (IHGA)
- Museu Amazônico (MA)
- J. G. Araújo Collection

Porto Velho, RO
- Centro de Documentação Histórica do Estado de Rondônia (CDHR)
- Aluízio Ferreira Papers
  - Centro de Documentação Histórica do Tribunal de Justiça de Rondônia (TJR)

Rio Branco, AC
- Departamento de Patrimônio Histórico Cultural do Acre (DPHC)
- Museu da Borracha

Rio de Janeiro, RJ
Arquivo Nacional (AN)
Departamento de Arquivo e Documentação da Casa de Oswaldo Cruz/ Fiocruz (FIOC)
Fundação Getúlio Vargas (FGV)
Centro de Pesquisa e Documentação de História Contemporânea do Brasil
Museu do Índio (MI)

UNITED STATES

College Park, MD
National Archives and Records Administration (NA)
Hyde Park, NY
Franklin D. Roosevelt Presidential Library (FDRPL)
Lafayette, LA
Edith Garland Dupré Library, University of Louisiana at Lafayette (EGDL)
Jefferson Caffery Collection
Princeton, NJ
Princeton University Library (PUL)
Rubber Development Corporation, Amazon Division Records, Mudd Manuscript Library
Sleepy Hollow, NY
Rockefeller Archive Center (RAC)

Periodicals

O Acre
Agriculture in the Americas
Akron Beacon Journal
Alto Madeira
Boletim da Associação Comercial do Amazonas
Boletim Geográfico
Boletim da Inspetoria Federal de Obras Contra as Secas
Correio do Ceará
Correio da Semana
Daily News (NY)
Diário do Nordeste
O Estado
Folha da Noite
O Jornal
Life
A Manhã
The New Republic
New York Herald Tribune
New York Times
A Noite

Nordeste Agrícola
Norte Agronômico
A Tribuna
O Unitário
Wall Street Journal

Public Documents

Anais da Assembléia Constituinte, vol. 17. June 27, 1946. Rio de Janeiro: Departamento de Imprensa Nacional, 1949, Sessão 98.

Banco de Crédito da Borracha, *Relatório de 1943*, March 1944.

Banco de Crédito da Borracha, *Relatório de 1944*, March 1945.

Estado do Ceará. *Relatório de 1943 apresentado ao Exmo. Sr. Dr. Getúlio Vargas presidente da República pelo Dr. Francisco de Menezes Pimentel*. Fortaleza: Imprensa Official, 1945.

Instituto Brasileiro de Geografia e Estatística, *Censo Demográfico: População e Habitação (Série Regional, Parte VI-Ceará, Tomo 1)*. Rio de Janeiro: IBGE, 1940.

Interventoria Federal no Estado do Amazonas. *Exposição ao Exmo. Sr. Dr. Getúlio Vargas, Presidente da República, por Álvaro Maia, Interventor Federal*. Manaus, 1939.

Interventoria Federal no Estado do Amazonas. *Exposição ao Exmo. Sr. Dr. Getúlio Vargas, Presidente da República, por Álvaro Maia, Interventor Federal, maio de 1941–maio de 1942*. Manaus, 1942.

Interventoria Federal no Estado do Amazonas. *Exposição ao Exmo. Sr. Dr. Getúlio Vargas, Presidente da República, por Álvaro Maia, Interventor Federal, maio de 1942–maio de 1943*. Manaus: DEIP, 1943.

Lloyd Brasileiro. *Relatório 1944* (Rio de Janeiro, n.d.).

Propaganda Amazonense, A Visita do Presidente Vargas e as Esperanças de Resurgimento do Amazonas. Manaus: Imprensa Pública, 1940.

Relatório da Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia (December 1945).

Situação Econômica, Separata do Relatório Apresentado ao Senhor Presidente da República pelo Coronel Joaquim de Magalhães Cardoso Barata (Rio de Janeiro: Imprensa Nacional, 1944).

United States Tariff Commission. *Rubber: Possibilities of Producing Rubber in the United States and Rubber Conservation*. Washington, DC, September 1941.

General Works

Adas, Michael. *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance*. Ithaca, NY: Cornell University Press, 1989.

Aguiar, Brás Dias de. "Geografia Amazônica: Nas Fronteiras do Norte." *Revista Brasileira de Geografia* 4, 3 (July–September 1944).

Ahl, Frances Norene. *Two Thousand Miles up the Amazon*. Boston: Christopher Publishing House, 1941.

Albuquerque, João Alves de. *Vida dos municípios*, vol. 2. Fortaleza: Editora A. Batista Fontenele, 1945.

Albuquerque Júnior, Durval Muniz de. *Nordestino: Uma invenção do falo—uma história do gênero masculino (Nordeste, 1920/1940)*. Maceió: Catavento, 2003.
———. "Weaving Tradition: The Invention of the Brazilian Northeast." *Latin American Perspectives* 31, 2 (March 2004): 42–61.
Allegretti, Mary Helena. "The Amazon and Extracting Activities." In Miguel Clüsener Godt and Ignacy Sachs, eds., *Brazilian Perspectives on Sustainable Development of the Amazon Region*. Paris: UNESCO, 1995.
———. "Extractive Reserves: An Alternative for Reconciling Development and Environmental Conservation in Amazonia." In Anthony Anderson, ed., *Alternatives to Deforestation: Steps Towards Sustainable Use of the Amazon Rainforest*. New York: Columbia University Press, 1990.
Almeida, Anna Luiza Ozorio de. *The Colonization of the Amazon, 1970–1980*. Austin: University of Texas Press, 1992.
Almeida, João Leandro de, ed. "Transportes terrestres de omnibus." In *Guia da Cidade de Fortaleza*. Fortaleza: Empreza da Publicidade, 1939.
Almeida, Mauro Barbosa de. "The Politics of Amazonian Conservation." *Journal of Latin American Anthropology* 7, 1 (March 2002): 170–219.
———."The Rubber Tappers of the Upper Juruá River: The Making of a Forest Peasantry." Ph.D. diss., Cambridge University, 1993.
Amaral, Azevedo. *O Brasil na crise atual*. São Paulo: Companhia Editora Nacional, 1934.
Amaro, João. *Retalhos de minha vida e poesias populares*. Fortaleza: Imprensa Oficial do Ceará, 1986.
Anderson, Robin L. *Colonization as Exploitation in the Amazon Rain Forest, 1758–1911*. Gainesville: University Press of Florida, 1999.
Anderson, Warwick. *The Cultivation of Whiteness: Science, Health, and Racial Destiny in Australia*. New York: Basic Books, 2003.
———. "Immunities of Empire: Race, Disease, and the New Tropical Medicine, 1900–1920." *Bulletin of the History of Medicine* 70, 1 (1996): 94–118.
———. "The Natures of Culture: Environment and Race in the Colonial Tropics." In Paul Greenough and Anna Lowenhaupt Tsing, eds., *Nature in the Global South: Environmental Projects in South and Southeast Asia*. Durham, NC: Duke University Press, 2003.
Andrade, Almir de. *Contribuição à história administrativa do Brasil*, vol. 2. Rio de Janeiro: José Olympio, 1950.
Andrade, Humberto R. de, and Arthur Salgado. *Cera de Carnaúba*, 2nd ed. Ceará: Iracema, 1945.
Andrade, Lopes de. *Forma e efeito das migrações do nordeste*. Parahyba: A União Editora, 1952.
Apodaca, Joseph L. "Can the Americas Live Alone?" *Agriculture in the Americas* 1, no. 1 (Feb. 1941).
Appadurai, Arjun. "Introduction: Commodities and the Politics of Value." In Arjun Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press, 1986.

Appelbaum, Nancy P. *Muddied Waters: Race, Region, and Local History in Colombia, 1846–1948*. Durham, NC: Duke University Press, 2003.
Aragon, Luis E., and José Aldemir de Oliveira, eds. *Amazônia no cenário Sul-Americano*. Manaus: EDUA, 2009.
Argawal, Arun. *Environmentality: Technologies of Government and the Making of Subjects*. Durham, NC: Duke University Press, 2005.
Arnold, David. *The Problem of Nature: Environment, Culture and European Expansion*. Oxford: Blackwell, 1996.
Arnt, Ricardo Azambuja, and Stephan Schwartzman. *Um artifício orgânico: Transição na Amazônia e ambientalismo, 1985–1990*. Rio de Janeiro: Rocco, 1992.
Arons, Nicholas Gabriel. *Waiting for Rain: The Politics and Poetry of Drought in Northeast Brazil*. Tucson: University of Arizona Press, 2004.
Azevedo, Paulo Cesar de, and Vladimir Sacchetta, eds. *O século do automóvel no Brasil*. São Caetano do Sul: Brasinca, 1989.
B. F. Goodrich Company. *Bricks Without Straw: The Story of Synthetic Rubber, as told within the B. F. Goodrich Company*. Akron, OH: B. F. Goodrich Company, 1944.
Backheuser, Everardo. "Fronteiras da Geologia e da Geografia e a Unidade desta Ciência." In Instituto Brasileiro de Geografia e Estatística, *Geografia e educação*. Rio de Janeiro: IBGE, 1942.
———. *Problemas do Brasil: O espaço*. Rio de Janeiro: Omnia, 1933.
Baer, Werner. *Industrialization and Economic Development in Brazi*l. Homewood, IL: Irwin, 1965.
Bandeira, Moniz. *Presença dos Estados Unidos no Brasil: Dois séculos de história*. Rio de Janeiro: Civilização Brasileira, 1973.
Barbosa, Luiz C. *The Brazilian Amazon Rainforest: Global Ecopolitics, Development, and Democracy*. Lanham, MD: University Press of America, 2000.
Barbosa, Walmir de Albuquerque. *O cordel na Amazônia*. Manaus: Editora da Universidade do Amazonas, 1996.
Barham, Bradford L., and Oliver T. Coomes. *Prosperity's Promise: The Amazon Rubber Boom and Distorted Economic Development*. Boulder, CO: Westview, 1996.
Barkan, Elazar, and Ronald Bush, eds. *Prehistories of the Future: The Primitivist Project and the Culture of Modernism*. Palo Alto, CA: Stanford University Press, 1995.
Barreira, Cesar. *Trilhas e atalhos do poder: Conflitos sociais no Sertão*. Rio de Janeiro: Rio Fundo, 1992.
Barros, Glimedes Rego. *Nos confins do extremo oeste*. Rio de Janeiro: Biblioteca do Exército, 1993.
Barros, Jayme de. *A política exterior do Brasil (1930–1940)*. Rio de Janeiro: Departamento de Imprensa e Propaganda, 1941.
Batista, Djalma da Cunha. "Introdução." In Philippe Daou, ed., *Sobre o saneamento da Amazônia*. Manaus: Lux, 1972.
Baudrillard, Jean. *Selected Writings*. Ed. Mark Poster. Stanford, CA: Stanford University Press, 1988.
Bauer, Arnold J. "Rural Workers in Spanish America: Problems of Peonage and Oppression." *Hispanic American Historical Review* 59, 1 (1979): 34–63.

Bauer, P. T. *The Rubber Industry: A Study in Competition and Monopoly*. Cambridge, MA: Harvard University Press, 1948.
Beals, Carleton. *Dawn over the Amazon*. New York: Duell, Sloan, and Pearce, 1943.
———. "Future of the Amazon." *Survey Graphic* (March 1941).
———. *Pan America*. Harcourt, CT: Houghton Mifflin, 1940.
Beasley, Norman. *Men Working: A Story of the Goodyear Tire and Rubber Company*. New York: Harper and Brothers, 1931.
Beattie, Peter M. *The Tribute of Blood: Army, Honor, Race, and Nation in Brazil, 1864–1945*. Durham, NC: Duke University Press, 2001.
Becker, Bertha K. *Amazônia*. São Paulo: Editora Ática, 1990.
———. *Geopolítica da Amazônia: A nova fronteira de recursos*. Rio de Janeiro: Zahar, 1982.
Benchimol, Samuel. *Amazônia, um pouco-antes e além-depois*. Manaus: Calderaro, 1977.
———. *O cearense na Amazônia: Inquérito antropogeográfico sobre um tipo de imigrante*. Rio de Janeiro: SPVEA, Seção de Documentação e Relações Públicas, 1965.
———. "Population Changes in the Brazilian Amazon." In John Hemming, ed., *Change in the Amazon Basin, vol. 2: The Frontier after a Decade of Colonisation*. Manchester, UK: University of Manchester Press, 1985.
———. *Romanceiro da batalha da borracha*. Manaus: Imprensa Oficial, 1992.
Berger, Michael L. *The Automobile in American History and Culture: A Reference Guide*. Westport, CT: Greenwood Press, 2001.
Berman, Marshall. *All That Is Solid Melts into Air: The Experience of Modernity*. New York: Penguin, 1988.
Besse, Susan K. *Restructuring Patriarchy: The Modernization of Gender Inequality in Brazil, 1914–1940*. Chapel Hill: University of North Carolina Press, 1996.
Bethell, Leslie. "Brazil." In Leslie Bethell and Ian Roxborough, eds., *Latin America Between the Second World War and the Cold War, 1944–1948*. Cambridge: Cambridge University Press, 1997.
Bezerra, Antonio. *O Ceará e os cearenses*. Fortaleza: Fundação Waldemar Alcântara, 2001 [1906].
Bittencourt, Agnello. *Corografia do Estado do Amazonas*. Manaus: ACA-Fundo Editorial, 1985 [1925].
Blum, John Morton. *V Was for Victory: Politics and American Culture During World War II*. New York: Harcourt Brace Jovanovich, 1976.
Borgwardt, Elizabeth. *A New Deal for the World: America's Vision for Human Rights*. Cambridge, MA: Belknap Press of Harvard University Press, 2005.
Bouças, Valentim F. *Estudos econômicos e financeiros: Meio século de trabalho*, vol. 2. Rio de Janeiro: Edições Financeiras, 1953.
Bourdieu, Pierre. *Language and Symbolic Power*. Ed. John B. Thompson. Trans. Gino Raymond and Matthew Adamson. Cambridge: Basil Blackwell, 1991.
Bowman, Isaiah. "Introduction." In Bowman, ed., *Limits of Land Settlement: A Report on Present-Day Possibilities*. New York: Council on Foreign Relations, 1937.

———. "Possibilities of Land Settlement in South America." In Bowman, ed., *Limits of Land Settlement: A Report on Present-Day Possibilities*. New York: Council on Foreign Relations, 1937.
Braga, Sergio Soares. *Quem foi quem na Assembléia Nacional Constituinte de 1946: Um perfil socioeconômico e regional da Constituinte de 1946*. Brasília: Câmara dos Deputados, Coordenação de Publicações, 1998.
Branco, Carlos Heitor Castello. *Macunaíma e a viagem grandota: Cartas inéditas de Mario de Andrade*. São Paulo: Quatro Artes, 1970.
Brandes, E. W. "Rubber on the Rebound: East to West." *Agriculture in the Americas* 1, 3 (1941): 1–11.
Bresciani, Stella. "Forjar a identidade brasileira nos anos 1920–1940." In Francisco Foot Hardman, ed. *Morte e progresso: Cultura brasileira como apagamento de rastros*, 2nd ed. São Paulo: Unesp, 2005.
Briggs, Laura, Gladys McCormick, and J. T. Way. "Transnationalism: A Category of Analysis." *American Quarterly* 60, 3 (September 2008): 625–48.
Britton, John A. *Carleton Beals: A Radical Journalist in Latin Americ*a. Albuquerque: University of New Mexico Press, 1987.
Brockway, Lucile H. *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*. New Haven: Yale University Press, 2002.
Brody, David. "The New Deal and World War II." In John Braeman, Robert H. Bremner, and David Brody, eds., *The New Deal*. Columbus: Ohio State University Press, 1975.
Brooks, Reuben Howard. "Flight from Disaster: Drought Perception as a Force in Migration from Ceará, Brazil." Ph.D. diss., University of Colorado, 1972.
Browder, John O., and Brian J. Godfrey. *Rainforest Cities: Urbanization, Development, and Globalization of the Brazilian Amazon*. New York: Columbia University Press, 1997.
Brown, Rose, and Bob Brown. *Amazing Amazon*. New York: Modern Age Books, 1942.
Bryan, Carter R. "Rubber for Tires: Today's Lesson in Foreign Trade." *Brazil* (March 1942).
Bryce, James. *South America: Observations and Impressions*. New York: Macmillan, 1912.
Buckley, Eve. "Drought in the Sertão as a Natural or Social Phenomenon: Establishing the Inspetoria Federal de Obras Contra as Secas, 1909–1923." *Boletim do Museu Paraense Emílio Goeldi: Ciências Humanas* 5, 2 (May-August 2010): 379–98.
Buege, Douglas J. "The Ecologically Noble Savage Revisited." *Environmental Ethics* 18, 1 (spring 1986): 71–88.
Bunker, Stephen G., and Paul S. Ciccantell. *Globalization and the Race for Resources*. Baltimore: Johns Hopkins University Press, 2005.
Burden, William A.M. *The Struggle for Airways in Latin America*. New York: Arno Press, 1977 [1943].
Burns, E. Bradford. "Manaus, 1910: Portrait of a Boom Town." *Journal of Inter-American Studies* 7, 3 (July 1965): 400–421.
Butler, Hugh. "Our Deep Dark Secrets in Latin America." *Reader's Digest* (Dec. 1943): 21–25.

Cabral, Alfredo Lustosa. *Dez anos no Amazonas (1897–1907)*, 2nd ed. Brasília: Senado Federal, 1984.
Callado, Antonio. *Os industriais da seca e os "Galileus" de Pernambuco: Aspectos da luta pela Reforma Agrária no Brasil*. Rio de Janeiro: Editora Civilização Brasileira, 1960.
Calmon, Pedro. *História do Brasil na poesia do povo*. Rio de Janeiro: Bloch, 1973.
Camargo, Felisberto C. "Research in Tropical Brazil." *Agriculture in the Americas* 1, no. 12 (Dec. 1941).
Campos, André Luiz Vieira de. *Políticas internacionais de saúde na Era Vargas: O Serviço Especial de Saúde, 1942–1960*. Rio de Janeiro: Editora Fiocruz, 2006.
Campos, Renato Carneiro. *Ideologia dos poetas populares do nordeste*. Recife: Instituto Nacional de Estudos Pedagógicos, 1959.
Candido, Antonio. *Literatura e sociedade: Estudos de teoria e história literária*, 5th ed. São Paulo: Companhia Editora Nacional, 1976.
Cantanhede, Antonio. *Achegas para a história de Porto Velho*. Manaus: Seção de Artes Gráficas da Escola Técnica de Manaus, 1950.
Capelato, Maria Helena. "A borracha na economia brasileira da Primeira República." In Boris Fausto, ed., *O Brasil republicano: Estrutura de poder e economia, 1889–1930*, vol. 3. 285–307. São Paulo: Difel, 1975.
———. "Estado novo: Novas histórias." In Marcos Cezar Freitas, ed., *Historiografia brasileira em perspectiva*, 2nd ed. São Paulo: Contexto/USF, 1998.
———. *Multidões em cena: Propaganda política no varguismo e no peronismo*. Campinas: Papirus, 1998.
Carvalho, Carlos Miguel Delgado de. "Evolução da geografia humana." In Instituto Brasileiro de Geografia e Estatística, *Geografia e educação*. Rio de Janeiro: IBGE, 1942.
———. *Geographia humana, política e econômica*, 2nd ed. São Paulo: Companhia Editora Nacional, 1935.
Carvalho, José. *O matuto cearense e o caboclo do Pará: Contribuição ao Folclore Nacional*. Fortaleza: Imprensa Universitaria de Universidade Federal do Ceará, 1973.
Carvalho, Péricles Melo. "A concretização da 'Marcha para o Oeste.'" *Cultura Política* 1, 8 (Oct. 1941).
———. "A legislação imigratória do Brasil e sua evolução." *Revista de Imigração e Colonização* 1, 4 (Oct. 1940): 735.
Castro, Celso, ed. *Amazônia e defesa nacional*. Rio de Janeiro: Fundação Getúlio Vargas, 2006.
Castro, Eduardo Viveiros de. "Images of Nature and Society in Amazonian Ethnology." *Annual Review of Anthropology* 25 (1996): 179–200.
Castro, José Maria Ferreira de. *Jungle: A Tale of the Amazon Rubber-Tappers*. Trans. Charles Duff. New York: Viking, 1935.
Cava, Ralph Della. *Miracle at Joaseiro*. New York: Columbia University Press, 1970.
Centeno, Miguel Angel. *Blood and Debt: War and the Nation-State in Latin America*. University Park: Pennsylvania State University Press, 2002.
Certeau, Michel de. *The Writing of History*. Trans. Tom Conley. New York: Columbia University Press, 1988.

Chabloz, Jean-Pierre. *Revelação do Ceará*. Fortaleza: Secretaria de Cultura e Desporto do Estado do Ceará, 1993.
Chartier, Roger. *Forms and Meanings: Texts, Performances, and Audiences from Codex to Computer.* Philadelphia: University of Pennsylvania Press, 1995.
Chasteen, John. *Heroes on Horseback: A Life and Times of the Last Gaucho Caudillos*. Albuquerque: University of New Mexico Press, 1995.
Chiavenato, Julio José. *Geopolítica: Arma do fascismo*. São Paulo: Global Editora, 1981.
Childs, Jack. *Geopolitics and Conflict in South America: Quarrels Among Neighbors*. New York: Praeger, 1985.
Cinejornal brasileiro: Departamento de Imprensa e Propaganda, 1938–1946. São Paulo: Fundação Cinemateca Brasileira, 1982.
Cleary, David. "Extractivists, Indigenes, and Protected Areas: Science and Conservation Policy in the Amazon." In Anthony Hall, ed. *Global Impact, Local Action: New Environmental Policy in Latin America*. London: Institute for the Study of the Americas, 2005.
———. "Towards an Environmental History of the Amazon: From Prehistory to the Nineteenth Century." *Latin American Research Review* 36, 2 (2001): 64–96.
Coates, Austin. *The Commerce in Rubber: The First 250 Years*. Singapore: Oxford University Press, 1987.
Cobbs Hoffman, Elizabeth. *The Rich Neighbor Policy: Rockefeller and Kaiser in Brazil*. New Haven, CT: Yale University Press, 1992.
Cohen, Lizabeth. *A Consumer's Republic: The Politics of Mass Consumption in Postwar America*. New York: Knopf, 2003.
Collinson, Helen, ed. *Green Guerrillas: Environmental Conflicts and Initiatives in Latin America and the Caribbean*. Nottingham, UK: Russell Press, 1996.
Comissão Pastoral da Terra, ed. *Trabalho escravo no Brasil contemporâneo*. São Paulo: Loyola, 1999.
Conklin, Beth A. "Body Paint, Feathers, and VCRs: Aesthetics and Authenticity in Amazonian Activism." *American Ethnologist* 24, 4 (1997): 711–37.
Conselho Nacional de Geografia. *Amazônia brasileira*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1944.
Coronil, Fernando. *The Magical State: Nature, Money, and Modernity in Venezuela*. Chicago: University of Chicago Press, 1997.
Corrêa, Luiz de Miranda. *A borracha da Amazônia e a II Guerra Mundial*. Manaus: Edições Governo do Estado do Amazonas, 1967.
Corrêa, Roberto Ribeiro. "BASA: Seis décadas de mudança institucional." In Armando Dias Mendes, ed., *Amazônia: Terra e Civilização*, vol. 2. Belém: BASA, 2004.
Costa, Lustosa da. *Clero, Nobreza e povo de Sobral*. 2nd Edition. Rio de Janeiro: ABC Editora, 2004.
Costa, Wanderley Messias da. *Geografia política e geopolítica*. São Paulo: Hucitec; Editora da Universidade de São Paulo, 1992.
Cramer, Gisela, and Ursula Prutsch. "Nelson A. Rockefeller's Office of Inter-American Affairs (1940–1946) and Record Group 229." *Hispanic American Historical Review* 86, 4 (2006): 785–806.

Cruls, Gastão. "Arqueologia amazônica." In *Revista do Serviço do Patrimônio Histórico e Artístico Nacional* 6 (1942).
———."Impressões de uma visita à Companhia Ford Industrial do Brasil." In Conselho Nacional de Geografia, *Amazônia brasileira*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1944.
Cueto, Marcos. *The Return of Epidemics: Health and Society in Peru During the Twentieth Century*. Aldershot: Ashgate, 2001.
Cunha, Euclides da. *A margem da história*. Rio de Janeiro: Academia Brasileira de Letras, 2008 [1909].
Cunha, Manuela Carneiro da, and Mauro W. B. de Almeida. "Indigenous People, Traditional People, and Conservation in the Amazon," *Daedalus* 129, 2 (2000): 315–38.
———."Populações tradicionais e conservação ambiental." In João P. R. Capobianco et al., eds. *Biodiversidade amazônica—Avaliação e ações prioritárias para a conservação, uso sustentável e repartição de benefícios*. São Paulo: Instituto Socioambiental, 2001.
Cunha, Olivia Maria Gomes da. *Intenção e gesto: Pessoa, cor, e a produção cotidiana da (in)diferença no Rio de Janeiro, 1927–1942*. Rio de Janeiro: Arquivo Nacional, 2002.
Cunniff, Roger L. "The Great Drought, 1877–1889." Ph.D. diss., University of Texas, Austin, 1970.
Cytrynowicz, Roney. *Guerra sem guerra: A mobilização e o cotidiano em São Paulo durante a Segunda Guerra Mundial*. São Paulo: Geração / Editora da Universidade de São Paulo, 2000.
Daou, Ana Maria. "Tipos e aspectos do Brasil: Imagens e imagem do Brasil por meio da iconografia de Percy Lau." In Zeny Rosendahl and Roberto Lobato Corrêa, eds., *Paisagem, imaginário e espaço*. Rio de Janeiro: Editora UERJ, 2001.
Davis, Mike. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. London: Verso, 2001.
Dean, Warren. *Brazil and the Struggle for Rubber: A Study in Environmental History*. Cambridge: Cambridge University Press, 1987.
Deane, Leonidas M. "Malaria Vectors in Brazil." *Memórias do Instituto Oswaldo Cruz* 81 (1986): 5–14.
Deffontaines, Pierre. *Geographia humana do Brasil*. Rio de Janeiro: IBGE, 1940.
Demmon, E. L. "Rubber Production Opportunities in the American Tropics." *Journal of Forestry* 40, 3 (March 1942).
Diacon, Todd A. *Stringing Together a Nation: Cândido Mariano da Silva Rondon and the Construction of a Modern Brazil, 1906–1930*. Durham, NC: Duke University Press, 2004.
Dias, José Luciano de Mattos. "Os engenheiros do Brasil." In Angela Maria de Castro Gomes, ed. *Engenheiros e economistas: Novas elites burocráticas*. Rio de Janeiro: Fundação Getúlio Vargas, 1994.
Diegues, Antonio Carlos Sant'Ana. *O mito moderno da natureza intocada*, 5th ed. São Paulo: Hucitec; NUPAUB/USP, 2004.

Dietz, David. *The Goodyear Research Laboratory*. Akron, OH: Goodyear Tire and Rubber Company, 1943.
Doenecke, Justus D. *Danger Undaunted: The Anti-Interventionist Movement of 1940–1941 as Revealed in the Papers of the America First Committee*. Stanford, CA: Hoover Institution Press, 1990.
Dore, Elizabeth. "Capitalism and Ecological Crisis: Legacy of the 1980s." In Helen Collinson, ed., *Green Guerrillas: Environmental Conflicts and Initiatives in Latin America and the Caribbean*, 8–19. Nottingham, UK: Russell Press, 1996.
Douglas, Mary, and Aaron Wildavsky, eds. *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers*. Berkeley: University of California Press, 1982.
Drayton, Richard. *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World*. New Haven, CT: Yale University Press, 2000.
Dreifuss, René Armand. "Strategic Perceptions and Frontier Policies in Brazil." In Anthony Hall, ed., *Amazonia at the Crossroads: The Challenge of Sustainable Development*. London: Institute of Latin American Studies, 2000.
Duarte, Regina Horta. *A biologia militante: O Museu Nacional, especialização científica, divulgação do conhecimento e práticas políticas no Brasil—1926–1945*. Belo Horizonte: Editora UFMG, 2010.
Duque, José Guimarães. "O fomento da produção agrícola." *Boletim da IFOCS* 2, 2 (April–June 1939): 159–62.
Echevarría, Roberto González. "A Clearing in the Jungle: From Santa Mónica to Macondo from *Myth and Archive*." In Benigno Trigo, ed., *Foucault and Latin America: Appropriations and Deployments of Discursive Analysis*. New York: Routledge, 2002.
Eckes, Alfred E., Jr. *The United States and the Global Struggle for Minerals*. Austin: University of Texas Press, 1979.
"Economic Mobilisation and Man-Power Problems in Brazil." *International Labour Review* 47 (Jan.–June 1943): 724.
"Encaminhamento de trabalhadores nordestinos para a Amazônia." *Revista de Imigração e Colonização* 2, 2 (Aug. 1942): 9–15.
Environmental Law Institute. *Brazil's Extractive Reserves: Fundamental Aspects of Their Implementation*. Washington, DC: ELI, 1992.
Erb, Claude C. "Prelude to Point Four: The Institute of Inter-American Affairs." *Diplomatic History* 9, 3 (July 1985): 249–69.
Escobar, Arturo. *Encountering Development: The Making and Unmaking of the Third World*. Princeton, NJ: Princeton University Press, 1995.
———. *Territories of Difference: Place, Movements, Life, Redes*. Durham, NC: Duke University Press, 2008.
Escolar, Marcelo, Silvina Quintero Palacios, and Carlos Reboratti. "Geographical Identity and Patriotism in Argentina." In David Hooson, ed., *Geography and National Identity*. Oxford: Blackwell, 1994.
Espinheira, Ariosto. *Viagem através do Brasil, vol. 1, Norte: Amazonas e Pará*, 3rd ed. São Paulo: Edições Melhoramento, 1938.

Fabian, Johannes. *Time and the Other: How Anthropology Makes Its Object*. New York: Columbia University Press, 1983.
Faissol, Speridião. "Geography and Spatial Planning in Brazil." In David J. Robinson, ed., *Studying Latin America: Essays in Honor of Preston E. James*. Ann Arbor, MI: University Microfilms International, 1980.
Farmer, Paul. *AIDS and Accusation: Haiti and the Geography of Blame*. Berkeley: University of California Press, 1992.
Fausto, Boris. *A Concise History of Brazil*. Trans. Arthur Brakel. Cambridge: Cambridge University Press, 1999.
Fearnside, Philip. "Global Implications of Amazon Frontier Settlement: Carbon, Kyoto and the Role of Amazonian Deforestation." In Anthony Hall, ed., *Global Impact, Local Action: New Environmental Policy in Latin America*. London: University of London, 2005.
Feis, Hebert. *Seen from E.A.: Three International Episodes*. New York: Knopf, 1947.
Fernandes, Gonçalves. *Mobilidade, caráter e região*. Recife: Instituto Joaquim Nabuco de Pesquisas Sociais, 1959.
Ferraz, Álvaro, and Andrade Lima Júnior. *A morfologia do homem do nordeste (Estudo Biotipológico)*. Rio de Janeiro: José Olympio, 1939.
Ferreira, Jorge. *Trabalhadores do Brasil: O imaginário popular, 1930–45*. Rio de Janeiro: Fundação Getúlio Vargas, 1997.
Ferreira Filho, Cosme. *A borracha: Problema brasileiro*. Manaus: Conselho Técnico de Economia e Finanças do Estado do Amazonas, 1938.
Ferreira Neto, Cicinato. *Estudos de história jaguaribana: Documentos, notas e ensaios diversos para história do baixo e médio Jaguaribe*. Fortaleza: Premius, 2003.
Finlay, Mark R. *Growing American Rubber: Strategic Plants and the Politics of National Security*. New Brunswick, NJ: Rutgers University Press, 2009.
Firestone, Harvey S. *The Romance and Drama of the Rubber Industry*. Akron, 1936.
Fischer, Brodwyn. *A Poverty of Rights: Citizenship and Inequality in Twentieth-Century Rio de Janeiro*. Stanford, CA: Stanford University Press, 2008.
Fisher, William H. "Native Amazonians and the Making of the Amazon Wilderness: From Discourses of Riches and Sloth to Underdevelopment." In E. Melanie DuPuis and Peter Vandergeest, eds., *Creating the Countryside: The Politics of Rural and Environmental Discourse*. Philadelphia: Temple University Press, 1996.
Flink, James J. *The Automobile Age*. Cambridge, MA: MIT Press, 1988.
Fonseca, Cristina M. Oliveira. "Trabalhando com saúde pública pelo interior do Brasil: lembranças de uma geração de sanitaristas (1930–1970)." *Ciência e saúde coletiva* 5, 2 (2000): pp. 393–411.
Fontenelle, L. F. Raposo. *Rotina e fome em uma região cearense: Estudo antropológico*. Fortaleza: Imprensa Universitária do Ceará, 1969.
Frank, Waldo David. *South American Journey*. New York: Duell, Sloan and Pearce, 1943.
Freitas, Mario Martins de. "A mística e as realizações do Estado Nacional." *Cultura Política* 2, 19 (September 1942).

French, John D. *The Brazilian Workers' ABC: Class Conflict and Alliance in Modern São Paulo*. Chapel Hill: University of North Carolina Press, 1992.
Fricke, Ernest B. "The New Deal and the Modernization of Small Business: The McCeary Tire and Rubber Company, 1930–1940." In Robert Himmelberg, ed., *Survival of Corporatism During the New Deal Era, 1933–1945*. New York: Garland Publishing, 1994.
Frota, Lelia Coelho. "Mario de Andrade: Uma vocação de escritor público." In *Mario de Andrade: Cartas de trabalho-correspondência com Rodrigo Mello Franco de Andrade*. Brasília: Secretaria do Patrimônio Histórico e Artístico Nacional; Fundação Pró-Memória, 1981.
Frye, Alton. *Nazi Germany and the American Hemisphere, 1933–1941*. New Haven, CT: Yale University Press, 1967.
Funes, Euripedes A., and Adelaide Gonçalves. "Eldorado no inferno verde: Quem vive no inferno se acostuma com os cães." In Adelaide Gonçalves and Pedro Eymar Barbosa Costa, eds., *Mais borracha para a vitória*. Fortaleza: MAUC; NUDOC, 2008.
Galeno, Alberto Santiago. *Território dos coronéis*. Fortaleza: Editora Henriqueta Galeno, 1988.
Galeno, Juvenal. *Lendas e canções populares*, vol. 2. Fortaleza: Imprensa Universitária do Ceará, 1965.
Galey, John H. "The Politics of Development in the Brazilian Amazon, 1940–1950." Ph.D. diss., Stanford University, 1977.
Galvão, Francisco. "O homem e o deserto amazônicos." *Cultura Política* 1, no. 4 (June 1941): 44–50.
Gama, Franciane Lacerda. "Migrantes cearenses no Pará: faces da sobrevivência (1889–1916)." Ph.D. diss., Universidade de São Paulo, 2006.
Gamboa, Erasmo. *Mexican Labor and World War II: Braceros in the Pacific Northwest, 1942–1947*. Austin: University of Texas Press, 1990.
Gannon, Michael. "Invade Brazil?!" *U.S. Naval Institute Proceedings* 125, 10 (October 1999): 58–66.
Garfield, Seth. *Indigenous Struggle at the Heart of Brazil: State Policy, Frontier Expansion, and the Xavante Indians, 1937–1988*. Durham, N.C.: Duke University Press, 2001.
Garroutte, Eva Marie. "The Racial Formation of American Indians." *American Indian Quarterly* 25, 2 (spring 2001): 224–239.
Gates, R. Ruggles. *A Botanist in the Amazon Valley: An Account of the Flora and Fauna in the Land of Floods*. London: H. F. and G. Witherby, 1927.
Gehlsen, C. A. *World Rubber Production and Trade: Economic and Technical Aspects, 1935–1939*. Rome: International Institute of Agriculture, 1940.
Gellman, Irwin F. *Good Neighbor Diplomacy: United States Policies in Latin America, 1933–1945*. Baltimore: Johns Hopkins Press, 1979.
Girão, Raimundo. *História econômica do Ceará*. Fortaleza: Editora Instituto de Ceará, 1947.

Giucci, Guillermo. *The Cultural Life of the Automobile: Roads to Modernity*. Trans. Anne Mayagoitia and Debra Nagao. Austin: University of Texas Press, 2012.
Gomes, Angela Maria de Castro. *A invenção do trabalhismo*. Rio de Janeiro: Relume Dumará, 1994.
———."Novas elites burocráticas." In Castro Gomes, ed. *Engenheiros e economistas: Novas elites burocráticas*. Rio de Janeiro: Fundação Getúlio Vargas, 1994.
Gonçalves, Adelaide, and Pedro Eymar Costa, eds. *Mais borracha para a Vitória*. Brasilia: MMA; Fortaleza: MAUC, 2008.
Gondim, Linda M. P. "Creating the Image of a Modern Fortaleza: Social Inequalities, Political Changes, and the Impact of Urban Design." *Latin American Perspectives* 31, 2 (March 2004): 62–79.
Gondim, Neide. *A invenção da Amazônia*. 2nd ed. Manaus: Editora Valer, 2007.
Goodman, David, and Anthony Hall, eds., *The Future of Amazonia: Destruction or Sustainable Development*. New York: St. Martin's Press. 1990.
Goodman, Jordan. *The Devil and Mr. Casement: One Man's Battle for Human Rights in South America's Heart of Darkness*. New York: Farrar, Straus and Giroux, 2010.
The Goodyear Tire and Rubber Co. *43rd Annual Report to Stockholders, 1941*. Akron, Ohio, 1941.
Graham, Douglas H., and Sergio Buarque de Holanda Filho. *Migration, Regional and Urban Growth and Development in Brazil: A Selective Analysis of the Historical Record, 1872–1970*. São Paulo: Instituto de Pesquisas Econômicas-USP, 1971.
Grandin, Greg. *Fordlandia: The Rise and Fall of Henry Ford's Forgotten Jungle City*. New York: Metropolitan Books, 2009.
———. *The Last Colonial Massacre: Latin America in the Cold War*. Chicago: University of Chicago Press, 2004.
Grazia, Victoria de, and Ellen Furlough, eds. *The Sex of Things: Gender and Consumption in Historical Perspective*. Berkeley: University of California Press, 1996.
Green, David. *The Containment of Latin America: A History of the Myths and Realities of the Good Neighbor Policy*. Chicago: Quadrangle Books, 1971.
Greenfield, Gerald Michael. "The Great Drought and Elite Discourse in Imperial Brazil." *Hispanic American Historical Review* 72, 3 (1992): 375–400.
Greenough, Paul, and Anna Lowenhaupt Tsing, eds. *Nature in the Global South: Environmental Projects in South and Southeast Asia*. Durham, N.C.: Duke University Press, 2003.
Grove, Richard H. *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600–1860*. Cambridge: Cambridge University Press, 1996.
Gruzinski, Serge. *O pensamento mestiço*. Trans. Rosa Freire d'Aguiar. São Paulo: Companhia das Letras, 2001.
Gudynas, Eduardo. "The Fallacy of Ecomessianism: Observations from Latin America." In Wolfgang Sachs, ed. *Global Ecology: A New Arena of Political Conflict*. London: Zed Books, 1993.
Guerant, Edward O. *Roosevelt's Good Neighbor Policy*. Albuquerque: University of New Mexico Press, 1950.

Guerra, Antonio Teixeira. *Estudo geográfico do território do Acre*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1955.
Guerra, Paulo de Brito. *Flashes das secas: Coletânea de fatos e histórias reais*. Fortaleza: Divisão de Documentação, 1977.
Guha, Ramachandra, and Juan Martínez-Allier. *Varieties of Environmentalism: Essays North and South*. London: Earthscan, 1997.
Guillen, Isabel Cristina Martins. *Errantes da selva: Histórias da migração nordestina para a Amazônia*. Recife: Editora Universitária UFPE, 2006.
Guimarães, Fabio Macedo Soares. "Divisão regional do Brasil." In Instituto Brasileiro de Estatística, *Geografia e educação*. Rio de Janeiro: IBGE, 1942.
Gunther, John. *Inside Latin America*. New York: Harper and Brothers, 1941.
Hall, Anthony L. "Did Chico Mendes Die in Vain? Brazilian Rubber Tappers in the 1990s" In Helen Collinson, ed., *Green Guerrillas: Environmental Conflicts and Initiatives in Latin America and the Caribbean*. Nottingham, UK: Russell Press, 1996.
———. *Drought and Irrigation in North-East Brazil*. Cambridge: Cambridge University Press, 1978.
———. "Environment and Development in Brazilian Amazonia: From Protectionism to Productive Conservation," in Hall, ed., *Amazonia at the Crossroads: The Challenge of Sustainable Development* (London: Institute of Latin American Studies, 2000). Pp. 99–114.
———. "Paying for Environmental Services: The Case of Brazilian Amazonia." *Journal of International Development* 20, 7 (2008): 965–81.
———. *Sustaining Amazonia*. Manchester, UK: Manchester University Press, 1997.
Hanson, Earl Parker. *The Amazon: A New Frontier?* New York: Foreign Policy Association, 1944.
———. *Journey to Manaos*. New York: Reynal and Hitchcock, 1938.
Harris, Mark. *Life on the Amazon: The Anthropology of a Brazilian Peasant Village*. Oxford: Oxford University Press, 2000.
———. *Rebellion on the Amazon: The Cabanagem, Race, and Popular Culture in the North of Brazil*. New York: Cambridge University Press, 2010.
Harvey, David. *Justice, Nature, and the Geography of Difference*. Cambridge, MA: Blackwell Publishers, 1996.
Haskins, Caryl P. *The Amazon: The Life History of a Mighty River*. Garden City, NY: Doubleday, Doran, 1943.
Hatoum, Milton. *The Brothers*. Trans. John Gledson. New York: Farrar, Straus and Giroux, 2002.
Headrick, Daniel R. "Botany, Chemistry, and Tropical Development." *Journal of World History* 7, 1 (1996): 1–20.
———. *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940*. New York: Oxford University Press, 1988.
Hecht, Susanna B. "The Last Unfinished Page of Genesis: Euclides da Cunha and the Amazon." *Historical Geography* 2 (2004): 43–69.

———. *The Scramble for the Amazon and the "Lost Paradise" of Euclides da Cunha*. Chicago: University of Chicago Press, 2013.
Hecht, Susanna B., and Alexander Cockburn. *The Fate of the Forest: Developers, Destroyers, and Defenders of the Amazon*. New York: Harper Perennial, 1990.
Hemming, John. *Tree of Rivers: The Story of the Amazon*. New York: Thames and Hudson, 2008.
Herbert, Vernon, and Attilio Bisio. *Synthetic Rubber: A Project That Had to Succeed*. Westport, CT: Greenwood Press, 1985.
Herring, Hubert. *Good Neighbors: Argentina, Brazil, Chile and Seventeen Other Countries*. New Haven, CT: Yale University Press, 1941.
Hessel, M. S., W. J. Murphy, and F. A. Hessel. *Strategic Materials in Hemispheric Defense*. New York: Hastings House, 1942.
Hewitt, Kenneth. "The Idea of Calamity in a Technocratic Age." In Kenneth Hewitt, ed., *Interpretations of Calamity from the Viewpoint of Human Ecology*. Boston: Allen and Unwin, 1983.
Higgonet, Margaret Randolph, et al. *Behind the Lines: Gender and the Two World Wars*. New Haven, CT: Yale University Press, 1987.
Hilton, Stanley. *Brazil and the Great Powers, 1930–1939: The Politics of Trade Rivalry*. Austin: University of Texas Press, 1975.
Hirschman, Albert O. *Journeys Toward Progress: Studies of Economic Policy-Making in Latin America*. New York: Twentieth Century Fund, 1963.
Hochman, Gilberto. *A era do saneamento: As bases da política de saúde pública no Brasil*. São Paulo: Hucitec/Anpocs, 1998.
Hochman, Gilberto, and Cristina M. O. Fonseca. "O que há de novo? Políticas de saúde pública e previdência, 1937–45." In Dulce Pandolfi, ed., *Repensando o Estado Novo*. Rio de Janeiro: Editora Fundação Getúlio Vargas, 1999.
Hochstetler, Kathryn, and Margaret E. Keck. *Greening Brazil: Environmental Activism in State and Society*. Durham, NC: Duke University Press, 2007.
Honey, Maureen. *Creating Rosie the Riveter: Class, Gender, and Propaganda during World War II*. Amherst: University of Massachusetts Press, 1984.
Humphreys, R. A. *Latin America and the Second World War, Vol. 2, 1942–1945*. London: Athlone Press, 1982.
Hunnicutt, Benjamin H. *Brazil Looks Forward*. Rio de Janeiro: IBGE, 1945.
———. *Brazil: World Frontier*. New York: Van Nostrand, 1949.
Ianni, Octavio. *A idéia de Brasil moderno*. São Paulo: Editora Brasiliense, 1992.
Instituto Brasileiro de Estatística. *Geografia e educação*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1942.
Instituto Sociambiental. *Almanaque Brasil socioambiental*. São Paulo: ISA, 2004.
Jackson, Joe. *The Thief at the End of the World: Rubber, Power, and the Seeds of Empire*. New York: Viking, 2008.
James, Preston E. *Latin America*, 4th ed. New York: Odyssey Press, 1969.
Johnson, Allen W. *Sharecroppers of the Sertão: Economics and Dependence on a Brazilian Plantation*. Stanford, CA: Stanford University Press, 1971.

Jones, Jesse. *Fifty Billion Dollars: My Thirteen Years with the RFC (1932–1945)*. New York: Macmillan, 1951.
Kaplan, Amy. "'Left Alone with America': The Absence of Empire in the Study of American Culture." In Amy Kaplan and Donald E. Pease, eds. *Cultures of United States Imperialism*. Durham, NC: Duke University Press, 1993.
Keck, Margaret E. "Social Equity and Environmental Politics in Brazil: Lessons from the Rubber Tappers of Acre." *Comparative Politics* 27, 4 (July 1995): 409–24.
Keck, Margaret E., and Kathryn Sikkink. *Activists Beyond Borders: Advocacy Networks in International Politics*. Ithaca, NY: Cornell University Press, 1998.
Kern, Stephen. *The Culture of Time and Space, 1880–1918*. Cambridge, MA: Harvard University Press, 1983.
Klaren, Peter F., and Thomas J. Boosert. *Promises of Development: Theories of Change in Latin America*. Boulder, CO: Westview Press, 1986.
Klein, Kerwin Lee. *Frontiers of Historical Imagination: Narrating the European Conquest of Native America, 1890–1990*. Berkeley: University of California Press, 1997.
Kleinman, Mark L. *A World of Hope, a World of Fear: Henry A. Wallace, Reinhold Niebuhr, and American Liberalism*. Columbus: Ohio State University Press, 2000.
Klubock, Thomas Miller. *Contested Communities: Class, Gender, and Politics in Chile's El Teniente Copper Mine, 1904–1951*. Durham, NC: Duke University Press, 1998.
Knight, Alan. "Debt Bondage in Latin America." In Léonie Archer, ed., *Slavery and Other Forms of Unfree Labor*. Routledge: London, 1988.
Knorr, K. E. *World Rubber and Its Regulation*. Stanford, CA: Stanford University Press, 1945.
Kolk, Ans. *Forests in International Environmental Politics: International Organisations, NGOs, and the Brazilian Amazon*. Utrecht: International Books, 1996.
Krasner, Stephen D. *Defending the National Interest: Raw Materials Investments and U.S. Foreign Policy*. Princeton, NJ: Princeton University Press, 1978.
Lambourn, L. J., and A. G. Perret. "Tyres." In P. Schidrowitz and T. R. Dawson, eds., *History of the Rubber Industry*. Cambridge: W. Heffer, 1952.
Langford, M. H. "Science's Fight for Healthy Hevea." *Agriculture in the Americas* 6 (August 1944): 151–52.
Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Trans. Catherine Porter. Cambridge, MA: Harvard University Press, 2004.
———. *We Have Never Been Modern*. Trans. Catherine Porter. Cambridge, MA: Harvard University Press, 1993.
Lenharo, Alcir. *Colonização e trabalho no Brasil: Amazônia, Nordeste, e Centro Oeste, os Anos 30*. Campinas: Unicamp, 1985.
———. *Sacralização da política*. Campinas: Papirus; Editora da Unicamp, 1986.
Leonardi, Victor. *Fronteiras amazônicas do Brasil: Saúde e história social*. São Paulo: Marco Zero, 2000.
Levine, Robert M. *Father of the Poor? Vargas and His Era*. Cambridge: Cambridge University Press, 1998.
———. *Vale of Tears: Revisiting the Canudos Massacre in Northeastern Brazil, 1893–1897*. Berkeley: University of California Press, 1992.

Lewin, Linda. *Politics and Parentela in Paraíba: A Case Study of Family-Based Politics in Brazil*. Princeton, NJ: Princeton University Press, 1987.
Lief, Alfred. *The Firestone Story: A History of the Firestone Tire and Rubber Company*. New York: Whittlesey House, 1951.
"Ligeiros comentarios ao quadro de Assistência Médica de Inspetoria Federal de Obras Contra as Secas relativo aos meses de janeiro, fevereiro, e março de 1942." *Boletim do IFOCS* 17, 1 (Jan.–Mar. 1942).
Lima, Ariza Maria Rocha. "A seca, o sertanejo e a ginástica sueca na II batalha da borracha." In Maria Juraci Maia Cavalcante, ed., *História e memória da educação no Ceará*. Fortaleza: Imprensa Universitária, 2002.
Lima, Henrique José de. "O estado como protetor." *Norte Agronômico* 4, 19 (April–July 1942): n.p.
Lima, José Francisco de Araújo. *Amazônia: A terra e o homem*, 4th ed. São Paulo: Editora Nacional, 1975.
Lima, Lauro de Oliveira. *Na ribeira do Rio das Onças (Limoeiro do Norte)*. Fortaleza: Assis Almeida, 1997.
Lima, Miguel Porfírio de. *Icó em fatos e memórias*. Icó: Igranol, 1995.
Lima, Nísia Trindade. *Um sertão chamado Brasil: Intelectuais e representação geográfica da identidade nacional*. Rio de Janeiro: Revan; IUPERJ, UCAM, 1999.
Linhares, Maria Yedda Leite, and Francisco Carlos Teixeira da Silva. *Terra prometida: Uma história da questão agrária no Brasil*. Rio de Janeiro: Campus, 1999.
Lira, Pimentel. "Farinha de Mandioca." *Nordeste Agrícola* 4, 1–2 (Sept.–Oct. 1939).
Litchfield, P. W. *Industrial Voyage: My Life as an Industrial Lieutenant*. Garden City, NY: Doubleday, 1954.
Little, Paul E. *Amazonia: Territorial Struggles on Perennial Frontiers*. Baltimore: Johns Hopkins University Press, 2001.
Livingstone, David N. *The Geographical Tradition: Episodes in the History of a Contested Enterprise*. Oxford: Blackwell, 1993.
"Lloyd Brasileiro." In João Leandro de Almeida, ed., *Guia da cidade de Fortaleza*. Fortaleza: Empreza da Publicidade, 1939.
Lohmann, Larry. "Green Orientalism." *The Ecologist* 23, 6 (1993): 202–4.
London, Mark, and Brian Kelly. *The Last Forest: The Amazon in the Age of Globalization*. New York: Random House, 2007.
Lopes, José Stenio. *Rio de esquecimento*. Fortaleza: Clã, 1956.
Lopes, R. Paula. "Social Problems and Legislation in Brazil." *International Labour Review* 44, no. 5 (Nov. 1941): 493–537.
Lugo, Ariel E. "H. T. Odum and the Luquillo Experimental Forest." *Ecological Modeling* 178 (2004): 65–74.
Lustosa, Antônio de Almeida. *Carta Pastoral sobre a seca de 1942*. Fortaleza, 1943.
MacDonald, N. P. *Hitler over Latin America*. London: Jarrolds, 1940.
Machado, Dulphe Pinheiro. "Relatório de uma viagem de inspeção através do nordeste em maio de 1942." *Revista de Imigração e Colonizacão* 3, 2 (August 1942): 27–95.
MacLiesh, Fleming, and Cushman Reynolds. *Strategy of the Americas*. New York: Duell, Sloan and Pearce, 1941.

Mahar, Dennis J. *Frontier Development Policy in Brazil: A Study of Amazonia*. New York: Praeger, 1979.
Maia, Álvaro. *Na vanguarda da retaguarda (Campanha da Produção da Borracha)*. Manaus: DEIP, 1943.
Maia, João Marcelo Ehlert. *A terra como invenção: O espaço no pensamento social brasileiro*. Rio de Janeiro: Zahar, 2008.
Maligo, Pedro. *Land of Metaphorical Desires: The Representation of Amazonia in Brazilian Literature*. New York: Peter Lang Publishing, 1998.
Mallery, T. D. "Rubber Studies Begin." *Agriculture in the Americas* 1, 3 (December 1941).
Manzon, Jean. *Flagrantes do Brasil*. Rio de Janeiro: Bloch, n.d.
Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920–1940*. Berkeley: University of California Press, 1985.
Marshall, Jonathan. *To Have and Have Not: Southeast Asian Raw Materials and the Origins of the Pacific War*. Berkeley: University of California Press, 1995.
Martinello, Pedro. *A "batalha da borracha" na Segunda Guerra Mundial*. Rio Branco: EDUFAC, 2004.
Martínez-Allier, Juan. *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*. Northampton, MA: Edward Elgar, 2002.
Martins, Paulo Henrique N. "O nordeste e a questão regional: Os equívocos do debate." In Marcos A. da Silva, ed., *República em migalhas: História regional e colonial*. São Paulo: Marco Zero, 1990.
Martins, Vicente. *Diocese de Sobral: Subsídios para a história e geneologias das paróquias*. Fortaleza: Tipografia Brasil, n.d.
Martins, Wilson. *The Modernist Idea: A Critical Survey of Brazilian Writing in the Twentieth Century*. Trans. Jack E. Tomlins. New York: New York University Press, 1970.
Mattos, Carlos de Meira. *Brasil: Geopolítica e destino*. Rio de Janeiro: José Olympio Editora, 1975.
Mattos, Dirceu Lino de. "Impressões de uma viagem à zona Bragantina do Pará." *Boletim Paulista de Geografia* 30 (1958): 38–62.
Mattos, Pedro. *Trinta dias em águas do Amazonas*. Rio de Janeiro: Francisco Alves, 1936.
McCann, Bryan. *Hello, Hello Brazil: Popular Music in the Making of Modern Brazil*. Durham, NC: Duke University Press, 2004.
McCann, Frank D., Jr. *The Brazilian-American Alliance, 1937–1945*. Princeton, NJ: Princeton University Press, 1974.
McCormick, John. *Reclaiming Paradise: The Global Environmental Movement*. Bloomington: Indiana University Press, 1989.
McDonald, James R. *A Geography of Regions*. Dubuque: W. C. Brown, 1972.
McLuhan, Marshall. *Understanding Media: The Extensions of Man*. London: Routledge, 2001.
McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: W. W. Norton, 2000.

Melby, John. "Rubber River: An Account of the Rise and Collapse of the Amazon Boom." *Hispanic American Historical Review* 22, 3 (August 1942): 452–69.
Mello, Alcino Teixeira de. *Nordestinos na Amazônia*. Rio de Janeiro: Instituto Nacional de Imigração e Colonização, Departamento de Estudos e Planejamento, 1956.
Mendel, William W. "The Brazilian Amazon: Controlling the Hydra." *Military Review* 79, 4 (July–August 1999): 18–28.
Mendes, José Amando. *Amazônia econômica, problema brasileiro*. Rio de Janeiro: A Noite, 1941.
Mendes, Chico. *Fight for the Forest: Chico Mendes in His Own Words*. New York: Monthly Review Press, 1992.
Mendonça, Sonia Regina de. *O ruralismo brasileiro, 1881–1931*. São Paulo: Hucitec, 1997.
Menezes, Raimundo de. *Nas ribas do rio-mar*. Rio de Janeiro: Anuário do Brasil, 1928.
Miller, Char, and Hal Rothman, eds. *Out of the Woods: Essays in Environmental History*. Pittsburgh: University of Pittsburgh Press, 1997.
Miller, Darrel. "Replacement of Traditional Elites: An Amazon Case Study." In John Hemming, ed., *Change in the Amazon Basin*. Vol. 2. Manchester, UK: University of Manchester Press, 1985.
Miller, Shawn William. *An Environmental History of Latin America*. Cambridge: Cambridge University Press, 2007.
———. *Fruitless Trees: Portuguese Conservation and Brazil's Colonial Timber*. Stanford, CA: Stanford University Press, 2000.
Milton, Kay. *Environmentalism and Cultural Theory*. London: Routledge, 1996.
"Monumento ao seringueiro." *Revista da Associação Comercial do Amazonas*, Número 277 (January 1940): 5.
Moog, Clodomir Vianna. *Bandeirantes e pioneiros: Paralelo entre duas culturas*, 2nd ed. Rio de Janeiro: Globo, 1961.
———. "O ciclo do Ouro Negro." In *Obras de Vianna Moog*, vol. 6. Rio de Janeiro: Editora Delta, 1966.
Moraes, Antonio Carlos Robert. *Território e história no Brasil*. São Paulo: Editora Hucitec; Annablume, 2002.
Moraes, Raymundo. *Na planicie amazônica*, 5th ed. São Paulo: Companhia Editora Nacional, 1939 [1926].
Morales, Lúcia Arrais. *Vai e vem, vira e volta: as rotas dos soldados da borracha*. São Paulo: Annablume, 2002.
Moreira, Eidorfe. *Conceito de Amazônia*. Rio de Janeiro: SPVEA, Coleção Araújo Lima, 1958.
———. *Influências amazônicas no nordeste*. Belém: UFPA/ NAEA, 1982.
Morris, Peter J. T. *The American Synthetic Rubber Research Program*. Philadelphia: University of Pennsylvania Press, 1989.
Moura, Gerson. *Autonomia na dependência: A política externa brasileira de 1935 a 1942*. Rio de Janeiro: Nova Fronteira, 1980.
———. *Tio Sam chega ao Brasil: A penetração cultural americana*. São Paulo: Brasiliense, 1984.

Moura, Ignácio, and Paulo Eleutherio. *A Amazônia do futuro*. Belém do Para: Livraria Clássica, 1926.
Moya, José C. *Cousins and Strangers: Spanish Immigrants in Buenos Aires, 1850–1930*. Berkeley: University of California Press, 1998.
Mulliken, Otis E., and Sarah E. Roberts. "Labor and Social Welfare." In Arthur P. Whitaker, ed., *Inter-American Affairs, 1943*. New York: Columbia University Press, 1944.
Nascimento, Benedicto Heloiz. *Formação da indústria automobilística brasileira*. Série Teses e Monografias, No. 24: Universidade de São Paulo, 1976.
Nascimento, Faustino. "O quinquênio do Estado Novo e o esforço de guerra no Brasil." In Ministério da Agricultura, Serviço de Documentação, *Marcha para o oeste (conferências culturais)*, vol. 1. Rio de Janeiro: Ministério de Agricultura, 1946.
Nash, Roderick. *Wilderness and the American Mind*, 3rd ed. New Haven, CT: Yale University Press, 1982.
Nash, Roy. *The Conquest of Brazil*. New York: Harcourt, Brace, 1926.
Naunton, W. J. S. "Synthetic Rubber." In P. Schidrowitz and T. R. Dawson, eds., *History of the Rubber Industry*. Cambridge: W. Heffer, 1952.
Neves, Frederico de Castro. "Getúlio e a seca: Políticas emergenciais na era Vargas." *Revista Brasileira de História* 21, 40 (2001): 107–29.
———. *A multidão e a história: Saques e outras ações de massas no Ceará*. Fortaleza: Governo do Estado do Ceará, Secretaria da Cultura e Desporto, 2000.
Nogueira, Luiz Eugênio. *O rádio no país das Amazonas*. Manaus: Editora Valer, 1999.
Noice, Harold. *Back of Beyond*. New York: G. P. Putnam, 1939.
Nugent, Stephen. *Amazonian Caboclo Society: An Essay on Invisibility and Peasant Economy*. Providence, RI: Berg, 1993.
Oliveira, Lucia Lippi. "O pensamento de Azevedo Amaral." In Lucia Lippi Oliveira, Monica Pimenta Velloso, Angela Maria de Castro Gomes, eds., *Estado Novo: Ideologia e poder*. Rio de Janeiro: Zahar, 1982.
Oliven, Ruben George. "O nacional e o regional na construção da identidade brasileira." *Revista Brasileira de Ciências Sociais* 2, 1 (October 1986): 68–74.
Pádua, José Augusto. "Natureza e projeto nacional: As origens da ecologia política no Brasil." In José Augusto Pádua, ed., *Ecologia e política no Brasil*. Rio de Janeiro: Espaço & Tempo/IUPERJ, 1987.
Pandolfi, Dulce Chaves. "A trajetória do norte: Uma tentativa de ascenso político." In Angela Maria de Castro Gomes, ed., *Regionalismo e centralização política: Partidos e constituinte nos anos 30*. Rio de Janeiro: Nova Fronteira, 1980.
Park, James William. *Latin American Underdevelopment: A History of Perspectives in the United States, 1870–1965*. Baton Rouge: Louisiana State University Press, 1995.
Patterson, Matthew. *Global Warming and Global Politics*. London: Routledge, 1996.
Peard, Julyan G. *Race, Place, and Medicine: The Idea of the Tropics in Nineteenth-Century Brazilian Medicine*. Durham, NC: Duke University Press, 1999.
Peirano, Mariza G. S. *A alteridade em contexto: A antropologia como ciência social no Brasil*. Brasília: Universidade de Brasília, Departamento de Antropologia, 1999.
Perazzo, Priscila Ferreira. "O confinamento de Acará: Japoneses na colônia de Tomé-

Açu no Pará durante a Segunda Guerra Mundial." In Maria Luiza Tucci Carneiro and Marcia Yumi Takeuchi, eds., *Imigrantes japoneses no Brasil: Trajetória, memória e imaginário*. São Paulo: Edusp, 2010.
———. *Prisioneiros da Guerra*. São Paulo: Imprensa Oficial/Arquivo do Estado, 1999.
Pereira, Marcos Carvalho. "A guerra na Amazônia: O diário de um soldado da borracha." Unpublished manuscript in author's possession.
Peres, Jefferson. *Evocação de Manaus: Como eu a vi ou sonhei*. Manaus: Editora Valer, 2002.
Petey, Beatriz Célia de Mello. "Aspectos da economia amazônica à época da depressão (1920–1940)." *Boletim Geográfico* 31, 229 (July–August 1972): 112–31.
Phillips, Henry Albert. *Brazil: Bulwark of Inter-American Relations*. New York: Hastings House, 1945.
Pike, Frederick B. *FDR's Good Neighbor Policy: Sixty Years of Generally Gentle Chaos*. Austin: University of Texas Press, 1995.
———. *The United States and Latin America: Myths and Stereotypes of Civilization and Nature*. Austin: University of Texas Press, 1992.
Pinheiro, Aurélio. *À margem do Amazonas*. São Paulo: Companhia Editora Nacional, 1937.
Pinheiro, Raimundo. "A influência da borracha na civilização amazônica." *Cultura Política* 2, 17 (July 1942): 185–90.
Pinto, Nelson Prado Alves. *Política da borracha no Brasil: A falência da borracha vegetal*. São Paulo: HUCITEC, 1984.
Pinto, Souza. "Geographia econômica do Ceará: As seccas de 1931 a 1933." *Revista do Instituto do Ceará* 52 (1938).
Platt, Robert S. *Latin America: Countrysides and United Regions*. New York: McGraw Hill, 1943.
Polenberg, Richard. "The Decline of the New Deal, 1937–1940." In John Braeman, Robert H. Bremner, and David Brody, eds., *The New Deal*. Columbus: Ohio State University Press, 1975.
———. *War and Society: The United States, 1941–1945*. Philadelphia: Lippincott, 1972.
Popkin, Samuel L. *The Rational Peasant: The Political Economy of Rural Society in Vietnam*. Berkeley: University of California Press, 1979.
Price, A. Grenfell. *White Settlers in the Tropics*. New York: American Geographical Society, 1939.
Price, Willard. *The Amazing Amazon*. London: Vanguard, 1954.
Queiroz, Rachel de. *O quinze*. Rio de Janeiro: José Olympio, 1948.
Rabello, Oricema Levy. *Minha vida no seringal*. Manaus: Prograf, 1996.
Raffles, Hugh. *In Amazonia: A Natural History*. Princeton, N.J.: Princeton University Press, 2002.
Ramos, M. Barros. "Seringueiros e seringalistas." *Boletim da Associação Comercial do Amazonas* 6, 67 (February 1947).
———. "Seringueiros e seringalistas." *Boletim da Associação Comercial do Amazonas* 6, 68 (March 1947).

Rands, R. D. "Hevea Rubber Culture in Latin America: Problems and Procedures." In Frans Verdoorn, ed., *Plants and Plant Science in Latin America*. Waltham, MA: Chronica Botanica Company, 1945.
Redford, Kent H. "The Ecologically Noble Savage." *Orion Nature Quarterly* 9, 3 (1990): 24–29.
Reich, Cary. *The Life of Nelson A. Rockefeller: Worlds to Conquer, 1908–1958*. New York: Doubleday, 1996.
Reid, J. J. "Marketing of Raw Rubber." In P. Schidrowitz and T. R. Dawson, eds., *History of the Rubber Industry*. Cambridge: W. Heffer and Sons, 1952.
Reis, Arthur Cezar Ferreira. *História do Amazonas*. Belo Horizonte: Editora Itatiaia, 1989 [1931].
———. *O seringal e o seringueiro*. Rio de Janeiro: Serviço de Informação Agrícola, 1953.
Relatório da Diretoria da ACA*, Ano Social de 1940*. Manaus: ACA, 1941.
Relatório da Diretoria da ACA*, Ano Social de 1943*. Rio de Janeiro: Imprensa Nacional, 1944.
Renda, Mary A. *Taking Haiti: Military Occupation and the Culture of U.S. Imperialism, 1915–1940*. Chapel Hill: University of North Carolina Press, 2001.
Reséndez, Andrés. *Changing National Identities at the Frontier: Texas and New Mexico, 1800–1850*. Cambridge: Cambridge University Press, 2004.
Resor, Randolf. "Rubber in Brazil: Dominance and Collapse, 1876–1945." *Business History Review* 51, 3 (fall 1977): 341–66.
Revkin, Andrew. *The Burning Season: The Murder of Chico Mendes and the Fight for the Amazon Rain Forest*. Boston: Houghton Mifflin, 1990.
Ribeiro, Genaro Vidal Leite. "Amazônia: Problema vital." Ministério da Agricultura, Serviço de Documentação, *Marcha para o oeste (conferências culturais)*, vol. 1. Rio de Janeiro: Ministério da Agricultura, 1946.
Ricci, Magda. "Cabanos, patriotismo e identidades: Outras histórias de uma revolução." In Keila Grinberg and Ricardo Salles, eds., *O Brasil Imperial, volume II: 1831–1870*, 187–231. Rio de Janeiro: Civilização Brasileira, 2009.
Rich, Bruce. *Mortgaging the Earth: The World Bank, Environmental Impoverishment, and the Crisis of Development*. Boston: Beacon Press, 1994.
Rios, Kênia Sousa. *Campos de concentração no Ceará: Isolamento e poder na seca de 1932*. Fortaleza: Museu do Ceará, Secretaria de Cultura e Desporto do Ceará, 2001.
Rival, Laura. "Trees, from Symbols of Life and Regeneration to Political Artefacts." In Laura Rival, ed., *The Social Life of Trees: Anthropological Perspectives on Tree Symbolism*. Oxford: Berg, 1998.
Rivera, José Eustasio. *La vorágine*. Bogotá: Ministerio de Educación, 1946.
Rock, David. "War and Postwar Intersections: Latin America and the United States." In David Rock, ed., *Latin America in the 1940s: War and Postwar Transition*. Berkeley: University of California Press, 1994.
Rodrigues, Roberto Martins. *A Amazônia paraense*. Belém: Karton, 1982.
Rodríguez, Ileana. *Transatlantic Topographies: Islands, Highlands, Jungles*. Minneapolis: University of Minnesota Press, 2004.

Roller, Heather Flynn. "Colonial Collecting Expeditions and the Pursuit of Opportunities in the Amazonian Sertão, c. 1750–1800." *Americas* 66, 4 (April 2010): 435–67.
Roquette-Pinto, E. "Contribuição à antropologia do Brasil." *Revista de Imigração e Colonização* 1, 3 (July 1940).
Rose, Sonya O. "Temperate Heroes: Concepts of Masculinity in Second World War Britain." In Stefan Dudink, Karen Hagemann, and John Tosh, eds., *Masculinities in Politics and War: Gendering Modern History*. Manchester, UK: Manchester University Press, 2004.
Rosenberg, Emily. *Spreading the American Dream: American Economic and Cultural Expansion 1890–1945*. New York: Harper Collins, 1982.
Rosenman, Samuel I., ed. *The Public Papers and Addresses of Franklin D. Roosevelt*. New York: Harper and Brothers, 1942.
Ross, Eric B. "The Evolution of the Amazon Peasantry." *Journal of Latin American Studies* 10, 2 (1978): 193–218.
Rubber, as Told Within the B. F. Goodrich Company. Akron, OH: B. F. Goodrich Company, 1944.
Russell, Joseph A. "Fordlandia and Belterra, Rubber Plantations on the Tapajos River, Brazil." *Economic Geography* 18, 2 (April 1942): 125–45.
Sá, Lucia. *Rain Forest Literatures: Amazonian Texts and Latin American Culture*. Minneapolis: University of Minnesota Press, 2004.
Saldivar, José David. *Border Matters: Remapping American Cultural Studies*. Berkeley: University of California Press, 1997.
Salles, Vicente. *Repente e Cordel: Literatura popular em versos na Amazônia*. Rio de Janeiro: FUNARTE, Instituto Nacional do Folclore, 1984.
Samis, Alexandre. *Clevelândia: Anarquismo, sindicalismo e repressão política no Brasil*. São Paulo: Imaginário, 2002.
Sampaio, A. J. de. *A alimentação sertaneja e do interior da Amazônia*. São Paulo: Editora Nacional, 1944.
———. *Biogeographia dynâmica: A natureza e o homem no Brasil*. São Paulo: Companhia Editora Nacional, 1935.
———. *Phytogeographia do Brasil*, 2nd ed. Companhia Editora Nacional, 1938.
Santos, Eloína Monteiro dos. *Uma liderança política cabocla: Álvaro Maia*. Manaus: Editora da Universidade do Amazonas, 1997.
Santos, Martha S. *Cleansing Honor with Blood: Masculinity, Violence, and Power in the Backlands of Northeast Brazil, 1845–1889*. Stanford, CA: Stanford University Press, 2012.
Santos, Roberto. *História econômica da Amazônia (1800–1920)*. São Paulo: T. A. Queiroz, 1980.
Schama, Simon. *Landscape and Memory*. New York: Columbia University Press, 1996.
Schapsmeier, Edward L., and Frederick H. Schapsmeier. *Prophet in Politics: Henry A. Wallace and the War Years, 1940–1965*. Ames: Iowa State University Press, 1971.
Scheper-Hughes, Nancy. *Death without Weeping: The Violence of Everyday Life in Brazil*. Berkeley: University of California Press, 1992.

Schmidt, José Carlos Junqueira. "O clima da Amazônia." In Conselho Nacional de Geografia, *Amazônia brasileira*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1944.
Schmink, Marianne. "Amazonian Resistance Movements." In Leszek Kosinski, ed., *Ecological Disorder in Amazonia: Social Aspects*. Paris: UNESCO, 1992.
Schmink, Marianne, and Charles H. Wood, eds. *Frontier Expansion in Amazonia*. Gainesville: University of Florida Press, 1984.
Schurz, W. L. "The Distribution of Population in the Amazon Valley." *Geographical Review* 15, 2 (April 1925): 206–25.
Schwartzman, Stephan. "Protecting the Amazon Rainforest, a Global Resource." *Environmental Defense Fund Letter* 20, 1 (February 1989): 7.
Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press, 1998.
Scott, Joan Wallach. *Gender and the Politics of History*. New York: Columbia University Press, 1999.
Secreto, María Verónica. *Soldados da borracha: Trabalhadores entre o sertão e a Amazônia no Governo Vargas*. São Paulo: Editora Fundação Perseu Abramo, 2007.
Seigel, Micol. *Uneven Encounters: Making Race and Nation in Brazil and the United States*. Durham, NC: Duke University Press, 2009.
Semeão, Jane D. "Comportamento feminino em Fortaleza: Entre o Tradicional e o Moderno durante a 2a Guerra Mundial (1939–1945)." In Simone de Souza and Frederico de Castro Neves, eds. *Gênero: Fortaleza, História e Cotidiano*. Fortaleza: Demócrito Rocha, 2002.
Sevcenko, Nicolau. *Literatura como missão: Tensões sociais e criação cultural na Primeira República*. São Paulo: Companhia das Letras, 2003.
Shanley, Patricia, and Gabriel Medina, eds. *Frutíferas e plantas úteis da vida amazônica*. Belém: CIFOR and IMAZON, 2005.
Shapiro, Helen. *Engines of Growth: The State and Transnational Auto Companies in Brazil*. Cambridge: Cambridge University Press, 1994.
Sharp, Ronald Hall. *South America Uncensored: Jungles of Fascism, Genuine Good-Neighborliness, Portrait of a Continent*. New York: Longmans, Green and Co., 1945.
Sidonio, R. "O perigo está dentro das fronteiras." *Terra Matura* 2, 10 (September 1939): n.p.
Silva, Francisco Chagas da. *Quixadá nos anos de 1910 a 1942*. Fortaleza: São Francisco, 1977.
Silva, Luiz Osiris da. "Tres capítulos importantes de história do BASA." In Armando Dias Mendes, ed., *Amazônia: Terra e civilização*, vol. 2. Belém: BASA, 2004.
Silva, M. Marinho. *O caboclo da Amazônia*. Belém: Livraria Carioca, 1931.
Silva, Maria Thereza L.L. de Castro e. *Colonização dirigida no Brasil: Suas possibilidades na região amazônica*, 2nd ed. Rio de Janeiro: IPEA/INPES, 1979.
Silva, Moacir M. F. "Geografia das fronteiras no Brasil." *Revista Brasileira de Geografia* 4, 4 (October–December 1942): 749–70.
———. "Transportes na Amazônia." In Conselho Nacional de Geografia, *Amazônia brasileira*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1944.

Silva, Moacir Paixão e. "Cidade e hinterlândia: Zoneamento de povoadores da Amazônia." *Boletim Geográfico* 2, no. 18 (Sept. 1944): 846.
Simis, Anita. *Estado e cinema no Brasil*. São Paulo: Annablume; FAPESP, 1996.
Slater, Candace. *Entangled Edens: Visions of the Amazon*. Berkeley: University of California Press, 2002.
———. *Stories on a String: The Brazilian Literatura de Cordel*. Berkeley: University of California Press, 1982.
Smith, Neil. *Uneven Development: Nature, Capital, and the Production of Space*, 3rd ed. Athens: University of Georgia Press, 2008.
Smith, Neil, and Anne Godlewska. "Introduction: Critical Histories of Geography." In Godlewska and Smith, eds., *Geography and Empire*. Oxford: Blackwell, 1994.
Soares, Lelia Gontijo. "Mario de Andrade e folclore." In *Mario de Andrade e a Sociedade de Etnografia e Folclore no Departamento de Cultura da Prefeitura do Município de São Paulo, 1936–1939*. Rio de Janeiro: Funarte; Instituto Nacional do Folclore, 1983.
Soares, Teixeira. *O Brasil no conflito ideológico global, 1937–1979*. Rio de Janeiro: Civilização Brasileira, 1980.
Sobrinho, Barbosa Lima. *Presença de Alberto Torres: Sua vida e pensamento*. Rio de Janeiro: Civilização Brasileira, 1968.
Sobrinho, Thomaz Pompeu. "O algodão como subsidiário das Obras contra as Secas." *Boletim da IFOCS* 1, 2 (February 1934).
———. "O homem do Nordeste." *Boletim da IFOCS* 2, 1 (July 1934): 34.
———. "As seccas do Nordeste (1825–1920)." In *Livro do Nordeste, commemorativo de primeiro centenário do Diário de Pernambuco, 1825–1925. Recife, 7 de novembro de 1925*. Pernambuco, Brazil, Officinas do Diário de Pernambuco, 1925.
Soluri, John. *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras*. Austin: University of Texas Press, 2005.
Sommer, Barbara. "Negotiated Settlements: Native Amazonians and Portuguese Policy in Pará, Brazil, 1758–1798." Ph.D. diss., University of New Mexico, 2000.
Soper, Fred Lowe, and David Bruce Wilson. *Campanha contra o "Anopheles gambiae" no Brasil*. Rio de Janeiro: Serviço de Documentação, Ministério da Educação e Saúde, 1945.
Sousa, José Bonifácio de. *Quixadá & serra do estevão*. Fortaleza: Universidade Federal do Ceará. 1997.
Souza, Marcio. *Breve história da Amazônia*. São Paulo: Marco Zero, 1994.
Souza, Simone de. "Da 'Revolução de 30' ao Estado Novo." In Simone de Souza, ed., *Uma nova história do Ceará*. Fortaleza: Demócrito Rocha, 2004.
Souza, Valdir Aparecido de. "(Des)ordem na fronteira: Ocupação militar e conflitos sociais na bacia do Madeira-Guaporé (30/40)." Master's thesis, Universidade Estadual Paulista, 2002.
Stanfield, Michael Edward. *Red Rubber, Bleeding Trees: Violence, Slavery, and Empire in Northwest Amazonia, 1850–1933*. Albuquerque: University of New Mexico Press, 1998.
Stepan, Nancy Leys. "'The Only Serious Terror in These Regions': Malaria Control in

the Brazilian Amazon." In Diego Armus, ed., *Disease in the History of Modern Latin America: From Malaria to AIDS*. Durham, NC: Duke University Press, 2003.
———. *Picturing Tropical Nature*. Ithaca, NY: Cornell University Press, 2001.
Stoler, Ann Laura. "Sexual Affronts and Racial Frontiers: European Identities and the Cultural Politics of Exclusion in Colonial Southeast Asia." In Frederick Cooper and Ann Laura Stoler, eds., *Tensions of Empire: Colonial Cultures in a Bourgeois World*. Berkeley: University of California Press, 1997.
Stoler, Ann Laura, and Frederick Cooper. "Between Metropole and Colony: Rethinking a Research Agenda." In Frederick Cooper and Ann Laura Stoler, eds., *Tensions of Empire: Colonial Cultures in a Bourgeois World*. Berkeley: University of California Press, 1997.
Stone, Roger D. *Dreams of Amazonia*. New York: Penguin Books, 1986.
Sutter, Paul S. *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement*. Seattle: University of Washington Press, 2002.
Sweet, David. "A Rich Realm of Nature Destroyed: The Middle Amazon Valley, 1640–1750." Ph.D. diss., University of Wisconsin, 1974.
Synthetic Rubber: The Story of an Industry. New York: International Institute of Synthetic Rubber Producers, 1973.
Takacs, David. *The Idea of Biodiversity: Philosophies of Paradise*. Baltimore: Johns Hopkins University Press, 1996.
Tambs, Lewis A. "Geopolitical Factors in Latin America." In Norman A. Bailey, ed., *Latin America: Politics, Economics, and Hemispheric Security*. New York: Frederick A. Praeger Publishers, 1965.
Tastevin, Constant. *The Middle Amazon: Its People and Geography*. Eleven Articles by Constant Tastevin. Trans. The Strategic Index of the Americas. Washington, 1943.
Taussig, Michael T. *Shamanism, Colonialism, and the Wild Man: A Study in Terror and Healing*. Chicago: University of Chicago Press, 1986.
Tavares, Vania Porto, Cláudio Monteiro Considera, and Maria Thereza L. L. de Castro e Silva. *Colonização dirigida no Brasil: Suas possibilidades na região amazônica*, 2nd ed. Rio de Janeiro: IPEA/INPES, 1979.
Telles, Pedro Carlos da Silva. *História da engenharia no Brasil, século XX*. Rio de Janeiro: Clavero, 1993.
Terra, Ruth Brito Lemos, ed. *A literatura de folhetos nos Fundos Villa-Lobos*. São Paulo: Instituto de Estudos Brasileiros, 1981.
Theóphilo, Rodolpho. *O paroara*. Fortaleza: L. C. Cholowiecki, 1889.
Théry, Hervé. "New Frontiers in the Amazon." In Anthony Hall, ed., *Global Impact, Local Action: New Environmental Policy in Latin America*. London: University of London, 2005.
Thompson, Peter. "New Age Mysticism, Postmodernism and Human Liberation." In Colin Riordan, *Green Thought in German Culture: Historical and Contemporary Perspectives*. Cardiff: University of Wales Press, 1997.
Thorp, Rosemary. "The Latin American Economies in the 1940s." In David Rock, ed., *Latin America in the 1940s: War and Postwar Transitions*. Berkeley: University of California Press, 1994.

Tocantins, Leandro. *O rio comanda a vida: Uma interpretação da Amazônia*, 7th ed. Rio de Janeiro: Livraria J. Olympio, 1983.
Topik, Steven. *The Political Economy of the Brazilian State, 1889–1930*. Austin: University of Texas Press, 1987.
Topik, Steven, Carlos Marichal, and Zephyr Frank, eds., *From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500–2000*. Durham, NC: Duke University Press, 2006.
Tota, Antonio Pedro. *O imperialismo sedutor: A americanização do Brasil na época da Segunda Guerra*. São Paulo: Companhia das Letras, 2000.
Travassos, Mario. *Introdução à geografia das comunicações brasileiras*. Rio de Janeiro: J. Olympio, 1942.
———. *Projeção continental do Brasil*, 3rd ed. São Paulo: Companhia Editora Nacional, 1938.
Trouillot, Michel-Rolph. *Silencing the Past: Power and the Production of History*. Boston: Beacon Press, 1995.
Truett, Samuel. *Fugitive Landscapes: The Forgotten History of the U.S.-Mexico Borderlands*. New Haven: Yale University Press, 2006.
Tsing, Anna Lowenhaupt. *Friction: An Ethnography of Global Connection*. Princeton, NJ: Princeton University Press, 2005.
Tucker, Richard P. *Insatiable Appetite: The United States and the Ecological Degradation of the Tropical World*. Berkeley: University of California Press, 2000.
Tully, John. *The Devil's Milk: A Social History of Rubber*. New York: Monthly Review Press, 2011.
Turazzi, Maria Inez. *Euforia do progresso e a imposição da ordem: A engenharia, a indústria e a organização do trabalho na virada do século XIX ao XX*. Rio de Janeiro: Marco Zero, 1989.
Turits, Richard Lee. "A World Destroyed, a Nation Imposed: The 1937 Haitian Massacre in the Dominican Republic." *Hispanic American Historical Review* 82, 3 (August 2002): 589–835.
Tuttle, William M., Jr. "The Birth of an Industry: The Synthetic Rubber 'Mess' in World War II." *Technology and Culture* 22, 1 (Jan. 1981): 35–67.
Uchoa, Waldery Magalhães. *Através do sertão*. Fortaleza: Tipografia Luso-Brasileira, 1938.
Uekoetter, Frank, ed. *The Turning Points of Environmental History*. Pittsburgh: Pittsburgh University Press, 2010.
Vale, Selda, and Ediney Azancoth. *Cenário de memórias: Movimento teatral em Manaus, 1944–1968*. Manaus: Editora Valer/Governo do Estado do Amazonas, 2001.
Vandergeest, Peter, and E. Melanie DuPuis. "Introduction." In DuPuis and Vandergeest, eds. *Creating the Countryside: The Politics of Rural and Environmental Discourse*. Philadelphia: Temple University Press, 1996.
Varre, William La. *Southward Ho!: A Treasure Hunter in South America*. New York: Doubleday, Doran, 1940.
Vasconcelos, Henrique Doria de. "A colonização da Amazônia." *Revista de Imigração e Colonização* 4, 1 (March 1943): 83–90.

———. "Viagem de Inspeção ao Norte." *Revista de Imigração e Colonizacão* 3, 2 (August 1942): 96–140.
Vellozo, Nilo Oliveira. *Rumo ao desconhecido*. Rio de Janeiro: n.d., n.p.
Veras, Carlos dos Santos. "A carnaubeira: Sua influência na sociedade e na economia do nordeste." *Cultura Política* 2, 17 (July 1942).
Verdoorn, Frans, ed. *Plants and Plant Science in Latin America*. Waltham, MA: Chronica Botanica Company, 1945.
Villa, Marco Antonio. *Vida e morte no sertão: História das secas no Nordeste nos séculos XIX e XX*. São Paulo: Ática, 2000.
Viola, Eduardo. "O movimento ecológico no Brasil (1974–1986): Do ambientalismo à ecopolítica." In José Augusto Pádua, ed., *Ecologia e política no Brasil*. Rio de Janeiro: Espaço and Tempo/IUPERJ, 1987.
Wagley, Charles. "Race Relations in an Amazon Community." In Charles Wagley, ed., *Race and Class in Rural Brazil*. Paris: UNESCO, 1952.
Walker, Samuel J. *Henry A. Wallace and American Foreign Policy*. Westport, CT: Greenwood Press, 1976.
Wallace, Henry Agard. "Economic Warfare: The War Behind the War." *Army and Navy Journal*, August 29, 1942.
———. *The Price of Vision: The Diary of Henry A. Wallace*. Ed. John Morton Blum. Boston: Houghton Mifflin, 1973.
Weart, Spencer. *The Discovery of Global Warming*. Cambridge, MA: Harvard University Press, 2003.
Webb, Kempton E. "Developments in Brazilian Geography During the Twentieth Century." In David J. Robinson, ed., *Studying Latin America: Essays in Honor of Preston E. James*. Ann Arbor, MI: University Microfilms International, 1980.
Wegner, Robert. *A conquista do oeste: A fronteira na obra de Sérgio Buarque de Holanda*. Belo Horizonte: Editora Horizonte, 2000.
Weinstein, Barbara. *The Amazon Rubber Boom, 1850–1920*. Stanford, CA: Stanford University Press, 1983.
———. *For Social Peace in Brazil: Industrialists and the Remaking of the Working Class in São Paulo, 1920–1964*. Chapel Hill: University of North Carolina Press, 1996.
———."Making Workers Masculine: The (Re)Construction of Male Worker Identity in Twentieth-Century Brazil." In Dudink, Hagemann, and Tosh, eds., *Masculinities in Politics and War: Gendering Modern History*. Manchester, UK: Manchester University Press, 2004.
———. "Persistence of Caboclo Culture in the Amazon: The Impact of the Rubber Trade, 1850–1920." In Eugene Philip Parker, ed., *The Amazon Caboclo: Historical and Contemporary Perspectives*. Williamsburg, VA: Department of Anthropology, College of William and Mary, 1985.
———. "Tropical Modernity: North American Visions of the Amazon on the Eve of the Cold War." *Revista do Instituto de Estudos Brasileiros* 45 (2007): 153–76.
Welch, Cliff. *The Seed Was Planted: The São Paulo Roots of Brazil's Rural Labor Movement, 1924–1964*. University Park: Pennsylvania State University Press, 1999.

Whitaker, Arthur P. *The Western Hemisphere Idea: Its Rise and Decline*. Ithaca, NY: Cornell University Press, 1954.
Whitbeck, Ray Hughes, and Frank E. Williams. *Economic Geography of South America*. Portsmouth, NH: Greenwood Press, 1971 [1940].
White, Richard. "'Are You an Environmentalist or Do You Work for a Living?': Work and Nature." In William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature*. New York: W.W. Norton, 1996.
———. "The Nationalization of Nature." *Journal of American History* 86, 3 (December 1999): 976–86.
Whitehead, Neil L., ed. *Histories and Historicities in Amazonia*. Lincoln: University of Nebraska Press, 2003.
Wilkinson, Xenia V. "Tapping the Amazon for Victory: Brazil's 'Battle for Rubber' of World War II." Ph.D. diss., Georgetown University, 2009.
Williams, Daryle. *Culture Wars in Brazil: The First Vargas Regime, 1930–1945*. Durham, NC: Duke University Press, 2001.
Wilson, Charles Morrow. *Trees and Test Tubes: The Story of Rubber*. New York: H. Holt and Company, 1943.
Wisniewski, A. *Fraudes no preparo da borracha crua*. *Boletim Técnico do Instituto Agronômico do Norte*, June 1949.
Witherspoon, Anna. *Let's See South America*. Dallas: Southern Publishing Company, 1939.
Wolf, Eric R. *Europe and the People Without History*. Berkeley: University of California Press, 1982.
Wolf, Howard, and Ralph Wolf. *Rubber: A Story of Glory and Greed*. New York: Covici, Friede, 1936.
Wolfe, Joel. *Autos and Progress: The Brazilian Search for Modernity*. Oxford: Oxford University Press, 2010.
———. "The Faustian Bargain Not Made: Getúlio Vargas and Brazil's Industrial Workers, 1930–1945." *Luso-Brazilian Review* 31, 2 (winter 1994): 77–95.
Wolff, Cristina Scheibe. *Mulheres da floresta, uma história: Alto Juruá, Acre, 1890–1945*. São Paulo: Hucitec, 1999.
Wood, Bryce. *The Making of the Good Neighbor Policy*. New York: Columbia University Press, 1961.
Woodroffe, Joseph Froude, and Harold Hamel Smith. *The Rubber Industry of the Amazon and How Its Supremacy Can Be Maintained*. London: T. Gisher Unwin, 1916.
Worster, Donald. *Nature's Economy: A History of Ecological Ideas*. Cambridge: Cambridge University Press, 1977.
Zelter, Angie. "Grassroots Campaigning for the World's Forests." In Laura Rival, ed., *The Social Life of Trees: Anthropological Perspectives on Tree Symbolism*. Oxford: Berg, 1998.
Zhouri, Andréa. "Árvores e gente no ativismo transnacional: As dimensões social e ambiental na perspectiva dos campaigners britânicos pela Floresta Amazônica." *Revista de Antropologia* 44, 1 (2001): 9–52.

INDEX

Page numbers in italics indicate figures.

Aben-Athar, Jayme, 32
Abolish Peonage Committee, 114
Abuña (river), 91, 97
Acre (state), 2, 18, 94–104, 146, 152
agriculture: cattle ranching and, 208–9, 215, 221; coffee and, 149–50, 155; cotton and, 133–38, 141, 155; deforestation and, 214–19; northeastern Brazil and, 129–41, 168–69; scientific and technological advances and, 21, 25, 37–39, 60–66, 77, 86–87, 115–16, 133, 173–74, 183, 206; smallholders and, 128–29, 132–38, 187; subsistence and, 64, 86, 123–24, 151, 177–78, 187–206. *See also* Amazon, the; Brazil; drought; migration; Office of the Coordinator of Inter-American Affairs (OIAA); rubber
Agriculture in the Americas (USDA), 66–67
agronomy, 22, 25, 36–39, *39*, 44–46, 66, 102. *See also* agriculture
Airport Development Program, 25, 197
airports, 25, 65, 176, 197, *198*, 209–10
Albuquerque, Durval de, 128
Alexopoulos, Constantino, 104
Alfonso, Junqueira & Cia (firm), 201
Allen, Douglas, 77, 80, 172, 208
Almeida, Mauro Barbosa de, 94, 99, 101
Amaral, Azevedo, 31
À Margem do Amazonas (Pinheiro), 27
Amazon (river), 12–14, 17, 19, 36. *See also specific tributaries*
Amazon, the: biota management and, 36–39; Brazilian nationalism and, 9–14, 19–46, 177–79; class issues in, 12, 26–29, 86–88, 120–21, 128–29, 171; colonialism and, 4–8, 10, 12–23, 29–31, 35–36, 46–49, 68–70, 75–80, 103–5, 132–33, 147–48, 206–11; definitions of, 2–3, 8, 39–43; deforestation and, 184, 207, 213–28; geopolitical importance of, 2–14, 19–36, 43–45, 49–53, 63, 70–84, 168–72, 206–12, 227–28; maps of, *42*, *57*; migrations to, 17, 23, 87, 125–27, 129–41, 143–55, 161–64, 184–87, 195, 257n9; modernization efforts and, 197–211, 214–19; as natural patrimony, 70; propaganda representations of, 117–23, 127–28, 139–40, 168–69; public health discourses and, 26–29, 32–35, 72–73, 105, 146–48, 164–71, 177–79, 187–94, 198, 207–8; scientific rationality and, 5–6, 10, 32–47, 86–87, 115–16, 164, 217–22, 226–27; social meanings of, 1, 3, 5–6, 9–10, 88, 104–5, 127–28, 155–61, 198–206, 210–11,

Amazon, the (*continued*)
213–28, 257nn9–10; subsistence agriculture in, 64, 86, 123–24, 151, 177–78, 187–206; transnational discourses and, 7–8, 43–45, 134–38, 214–28; transportation issues and, 35–36, 70–75, 132–38, 141–46, 164–68, 171–73, 210–11; U.S. investment in, 70–82, 171–79, 206–11, 227–28; World War II diplomacy and, 48–52, 70–75, 80–84, 211–12. *See also* Brazil; class; colonialism; environmental determinism; gender; labor; migration; nations and nationalism; rubber; tappers (of rubber); World War II; *specific agencies, people, rivers, and states*
Amazonas (state), 2, 12, 30, 152
Amazon Awakens, The (film), 118
Amazônia—A Terra e o Homem (Lima), 34
Amazônia brasileira, 42
Amazonian Alliance of the Peoples of the Forest, 223
Amazon River Line, 36
Amazon River Steam Navigation Company, 22–23
America First Committee, 67–68
American Geographical Society, 69
American Redemptorist Fathers, 120
Anderson, Robin, 151
Andrade, Gilberto Osorio de, 153
Andrade, Mário de, 44–45
Angelim, Eduardo, 150
anthropology, 3–4, 14, 43–45, 52, 99, 136, 147–48, 223
Appadurai, Arjun, 3, 52
Aranha, Oswaldo, 11, 25
Araújo, Agesislau, 186–87
Argentina, 29, 31, 184
A Selva (de Castro), 44
Asia, rubber production in, 7, 49–50, 57–59, 66, 75, 83, 174. *See also* Ceylon; Japan
Associação Comercial do Amazonas (ACA), 20, 125, 185–86, 193
atabrine, 177, 190–91
Atlantic trade routes, 4, 14–15, 70–72, 103, 106, 141, 156, 164, 166
automobiles, 52–56, 59–63. *See also* Brazil; rubber; transportation issues; World War II

Backheuser, Everardo, 40
Banco da Amazônia (BASA), 207
Banco de Crédito da Borracha, 72, 114, 184–87, 201, 207
Barreto, Clovis, 143
Barros, João Alberto Lins de, 74, 106, 210
Baruch, Bernard M., 50
Battle for Rubber (mobilization campaign), 110, 117–24, 127–28, 179–87, 200, 206
Beals, Carleton, 68–69
Becker, Bertha, 5
Belém, 12–25, 32–36, 44–45, 73, 93, 103–18, 164–68, 189–98
Benchimol, Samuel, 5, 142, 156
Big Four (tire manufacturers), 24, 59–61, 77, 83, 206
biodiversity, 8, 213–28
biotype studies, 146–48
Bittencourt, Agnello, 11
Board of Economic Warfare (BEW), 75–81, 114–15, 174. *See also* Economic Defense Board
Bogardus, R. B., 77
Boletim Geográfico, 106
Bolivia, 23, 30–31, 77, 97, 108, 143, 151, 184
Bopp, Raul, 44
borderlands, 46–47, 68–70. *See also* Amazon, the; Brazil; colonialism; geopolitics; migration; national security discourses; Vargas, Getúlio
Bouças, Valentim, 200, 207
Bourdieu, Pierre, 28
Brandes, Elmer, 38, 66
Brazil: citizenship discourses in, 111–17, 125–26, 200–204; constitutions of, 204, 210; indigenous peoples of, 103–5, 132–33, 141, 148, 223; industrialization and modernization in, 2, 19–23, 35–36, 41–47, 75–80, 84, 111–17, 133–34, 138–41, 143–48, 194–211; military of, 29–31, 46, 111–23, 210–11, 214–22; nationalism and, 2–4, 9–14, 19–46, 102–5, 109–23, 148,

177–79, 200–204, 206–11; rubber production figures and, 66, 91–92, *175*, 195; U.S. investments in and alliance with, 7–8, 60–66, 70–75, 80–82, 88, 117–23, 171–79, 206–11, 227–28; wartime government agencies of, 5, 10, 18, 24, 32–39, 70–75, 87–88, 100, 102–5, 132–43, 179–87, 204–11; World War II politics and, 24, 66–68, 103, 106, 211–12. *See also* Vargas, Getúlio; *specific agencies, people, places, and programs*
Brazilian Civil Code (1916), 100
Britain, 58, 63, 152
Bryan, Carter R., 53
Buarque de Holanda, Sérgio, 150
Bunker, Stephen G., 173
Bureau of Plant Industry, 66
Butler, Hugh A., 177

Cabanagem revolt, 16, 150
CAETA (Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia), 127, 199, 208
Calmon, Pedro, 157–58
Câmara, Helder, 121–22
Camargo, Felisberto, 38, *39*, 105
Campos, André Luiz Vieira de, 208
Cândido, Antônio, 44
Carnauba wax, 135–36
Carson, Rachel, 216
Carvalho, Carlos Delgado de, 40–41
Carvalho, José, 150
Carvalho, Péricles Melo, 31
Casement, Roger, 95
Casiquiare canal, 171, 176
Castro, José Maria Ferreira de, 44
Catholic Church, 105–6, 111, 117, 121–22, 126, 140, 204, 208
cattle ranching, 208–9, 215, 221
Ceará (state), 107–11, 119, 124, 127–46, 148–61, 180, 182. *See also* drought; labor; migration; rubber
Ceylon, 18, 51, 174
Chabloz, Jean-Pierre, *109*, 122
Chabloz, Regina Frota, 162–64
Chagas, Evandro, 33
Chartier, Roger, 226
Ciccantell, Paul S., 173
Cinejornais brasileiros (newsreel series), 45. *See also* propaganda
citizenship discourses, 111–17, 125–26, 200–204
class: environmentalism discourses and, 216–17, 220; gender dynamics and, 136–38; labor migration discourses and, 6, 10–12, 105, 113, 120–21, 125–26, 129–38, 148–53, 187–206; literacy and, 162, 199; paternalism and, 94–98, 140; production of space and, 39–43; public health concerns and, 32–35, 70–75, 135; racial inequalities and, 15–17, 31, 33–34, 80–82, 95, 147–48; scientific discourses and, 32–35, 43–45; social mobility and, 142–43. *See also* Brazil; labor; migration; rubber; tappers (of rubber)
Clayton, William, 77
climate change science, 218–22, 226–27
climatic determinism. *See* environmental determinism
Cobra Norato (Bopp), 44
Collor, Fernando, 218
colonialism: nature's transformation and, 1–2, 5–6, 10, 32–47, 86–87, 164, 217–22, 226–27; Portuguese Brazil and, 1, 11, 14–19, 87; raw material extraction and, 11–12, 17–21, 25, 37–39, 60–66; scientific discourses and, 5, 14, 21–23, 39–46, 69–70; U.S. hemispheric attitudes and, 26–29, 56, 68–70, 78–82, 84, 102, 117–18, 173, 176–79, 185–87, 194–98. *See also* Amazon, the
Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia (CAETA), 127, 199, 208
Comissão Brasileira Demarcadora de Limites, 171
Comissão das Linhas Telegráficas e Estratégicas de Mato Grosso e Amazonas, 35
Comissão Executiva de Defesa da Borracha, 187
commodity ecumene (term), 3
Compton, Karl T., 50

Conant, James B., 50
Conduru, Aberlardo, 114
Conquest of Brazil, The (Nash), 1
Conselho de Imigração e Colonização, 36, 142, 210
Conselho Federal do Comércio Exterior, 113
Conselho Nacional de Seringueiros (CNS), 223
conservation movement. *See* environmentalism (movement)
Consolidated Labor Laws (1943), 202
Coronil, Fernando, 57, 179
Corrêa, Luiz de Miranda, 186
Costa, Fernando, 37
cotton, 133–38, 141, 155
credit advances. *See* debt
Cruls, Gastão, 64
Cruls, Luis, 35–36
Cruz, Oswaldo, 32
Cultura Política (publication), 29
Curuça (river), 182

Dawn over the Amazon (Beals), 69–70
DDT (pesticide), 187–88, 207
Dean, Warren, 64, 188
Deane, Leonidas, 33
debt: Amazon's economic structure and, 12, 88, 94–102, 125, 176–79; citizenship discourses and, 112–17; governmental social justice initiatives and, 112–17, 176–87; rubber bosses' subsidies and, 180–87, 201; smallholders and sharecroppers and, 134, 136
"Decade of Destruction, The" (PBS), 219
Deffontaines, Pierre, 40–41
deforestation, 184, 207, 213–28
Departamento de Imprensa e Propaganda (DIP), 118
Departamento Nacional de Imigração (DNI), 23, 31, 106, 127, 143–46, 191, 203, 208
Department of Land and Colonization (Brazil), 22
dependency theory, 170–71
Dies, Martin, 80
disease, 12, 22, 32–35, 70–75, 105, 135, 171–79. *See also* epidemiology; malaria; tappers (of rubber)
DNI (Departamento Nacional de Imigração). *See* Departamento Nacional de Imigração (DNI)
drogas do sertão, 15
drought, 17, 128–41, 168–69. *See also* Ceará (state)
Dunlop, John, 17
Dutch East Indies, 57–58, 65
Dutra, Eurico, 200

Economic Defense Board, 66. *See also* Board of Economic Warfare (BEW)
El Dorado (trope), 14, 70, 84, 150
Em Guarda (magazine), 118, 123
empate, 222–23
engineers, 6, 35–38, 44–50, 69, 72, 138, 171–79, 207–10. *See also* scientific and technological rationality; *specific development and management projects*
Environmental Defense Fund, 217–18, 224
environmental determinism, 26–40, 44–48, 56, 68–70, 80–91, 102–5, 173–79
environmental history, 6–7
environmentalism (movement), 213–28
Environmental Protection Agency (EPA), 216
epidemiology, 22, 32–35, 72, 105, 146–48, 177, 187–91, 194, 198, 207
Escola Livre Superior de Geografia, 40
Estado Novo. *See* Brazil; Vargas, Getúlio
Esterci, Neide, 99
ethnography, 36, 44–45, 94, 101, 224
Executive Order 9128, 75
extractivism, 1, 173–79, 188, 213–14, 266n176. *See also* deforestation; rubber

Faddis, Charles, 102
families, of labor migrants, 148–55, 161–64, 199, *209*
Fearnside, Philip, 215
Federal Foreign Trade Commission, 44
Ferreira, Aluízio, 30, 206
films. *See* propaganda

Firestone (company), 24, 55–56, 59–61, 63, 83, 206
Firestone, Harvey, Jr., 55–56
First World War, 19, 38, 57, 70
Flink, James, 53
Ford, Henry, 63–65
Fordlândia, 63–65
Forest Code (of Brazil), 37–38, 203
Fortaleza, 110, 121, *121*, 124, *131*, *135*, 136–49, 162–68
Frank, Waldo, 139
Freyre, Gilberto, 14, 27–28
Friele, Berent, 118
Fundação Brasil Central (FBC), 208–10

Galeno, Juvenal, 159–61
gender: class structures and, 136–38, 180, *182*; marriage and, 153–55, 163–64, 289n54; rubber tapping and, 94, 105–11, 142, 186–87; wartime mobilization campaigns and, 105–11, 117, 129, 153–55, 161–64, 199, *209*
geographers, 39–43, 68–69, 93, 210
geographic diversification (of rubber supplies), 63–68
geopolitics, 2, 10–11, 25–31, 44–56, 80, 84, 139, 169, 199, 211–14, 224. *See also* Amazon, the; colonialism; rubber; United States
Germany: Brazilian trade policy and, 24, 66, 70; U.S. preclusive purchases and, 70–75; World War II military actions of, 29, 61, 65, 70–71, 103, 106, 141, 156, 166
Gomes Coelho, Luis Silvestre, 200
González Echevarría, Roberto, 44
Good Neighbor Policy, 25, 88, 139, 177
Goodrich (company), 59–61
Goodyear (company), 24, 59–61, 77, 206
Goodyear, Charles, 17
Graham, Douglas H., 150
Green Hell (trope), 10, 84, 88, 257n10
Green Party, 216
Grotti, Giocondo, 204
Guajará-Mirim, 23, 196, 201–3
Guajarina, Editora, 157
Guaporé (territory), 30–31
guayule, 57
Guedes, Mario, 25
Guerra, Paulo de Brito, 138
Gunther, John, 65
Guyana, 29

Hanson, Earl Parker, 9, 69
Harvey, David, 5, 51, 82
Hecht, Susanna, 5
Hemming, John, 15
Herring, Hubert, 9
Hevea brasiliensis (tree), 17, 25, 38, 56, 65–66, 77, 115–16, 184–87. *See also* rubber
highway construction, 5, 78, 145, 211–15, 224. *See also* transportation issues
Hoover, Herbert, 58
House Committee on Interstate and Foreign Commerce, 58
House Committee on Military Affairs, 102
House Un-American Activities Committee (HUAC), 80
Huallaga (river), 30
Huntington, Ellsworth, 34

Iaco (river), 182
I. G. Farbenindustrie, 62
illiteracy, 105–6, 113, 119, 124, 130, 134, 157–62, 199
Indian Protection Service (SPI), 103–4
indigenous peoples: colonial history of the Amazon and, 12–16; environmentalism movement and, 206–11, 223; racial discourses and, 95, 103–5, 141, 146, 148; wartime rubber campaign and, 12–16, 47, 132–33
Inspetoria Federal de Obras Contra as Secas (IFOCS), 133–34, 138
Instituto Agronômico do Norte (IAN), 22, 38, 66
Instituto Brasileiro de Geografia e Estatística (IBGE), 40–41
Instituto de Patologia Experimental do Norte (IPEN), 32–33
Instituto Evandro Chagas, 207
Instituto Histórico do Amazonas, 148

Instituto Histórico e Geográfico Brasileiro (IHGB), 40
Instituto Oswaldo Cruz, 32–33
Interdepartmental Committee on Strategic Materials, 60
International Geophysical Year, 221
International Rubber Regulation Committee (IRRC), 58–61
International Union for the Conservation of Nature and Natural Resources, 216

Jaguaribe Valley, 129, 136, *145*, 151, 156. *See also* Ceará (state)
Janeway, Eliot, 58
Japan, 49, 52, 57–58, 67, 75, 103
Japurá (river), 93, 185
Jaquirana (river), 104
Javari (river), 36, 115
J. G. Araújo (firm), 95, 97–98, 101, 149, 186
Joannini, Francis, 119
Jones, Jesse, 61, 76, 78, 80–82, 84. *See also* Reconstruction Finance Corporation (RFC)
Juruá (river), 13, 87, 93–94, 101, 151
Justiça do Trabalho, 112, 201–3
Jutaí (river), 93, 96, 180
J. Walter Thompson Agency, 124

Keck, Margaret, 216
Keeling, Charles David, 221
Kjellen, Rudolf, 31

labor: Amazonian bosses' relation to, 11, 87–105, 111–13, 123–26, 156, 170, 176–87, 191–206, 211–12, 223, 226–27, 264n143; citizenship discourses and, 111–17, 125–26, 200–204; gender and, 94, 100, 105–11, 114, 129, 180, *182*, 186–87, 193, 199–206, 289n54; global solidarity and, 78–79; government regulation of wartime materials and, 111–17, 168–69, 174, 184–87; infrastructure and development work and, 138–41, 143–46, 194–206, 215; literacy among, 105–6, 113, 119, 124, 130, 134, 157–62; migratory impulses and, 26–29, 87–89, 103–23, 125, 127, 129–46, 161–68, 176, 182, 204–6; public health and, 26–29, 72–73, 97, 105, 146–48, *147*, 164–68, 171, 177–79, 187–91, 194, 198, 207–8; race and, 14–16, 103–5, 176–79, 261n98; rationalization efforts and, 101–5, 115–17, 125–26, 142–43, 164, 171–79, 206; subsistence agriculture and, 64, 86, 123–24, 151, 177–78, 187–206; wage, 81, 113–15, 123–25, 142–43, 176–79, 183, 196–97, 199. *See also* migration; rubber; tappers (of rubber); United States
Labor Court, 112, 201–3
La Condamine, Charles-Marie de, 15
La Follette, Robert, 67
Landsat data, 215, 220
LaRue, Carl, 102
latex. *See* rubber
Latour, Bruno, 6, 219
Legal Amazon, 3, *3*
Lend-Lease Program, 67, 70, 179
Liberia, 63
Lima, Alfredo Vieira, 201
Lima, José Francisco de Araújo, 34–35
Limits to Growth, The (Club of Rome), 216
literacy, 105–6, 113, 119, 124, 130, 134, 157–62
literatura de cordel (chapbook literature in verse), 157–61
Lloyd Brasileiro (shipping line), 23, 142, 166
Lobato, Monteiro, 44
Lustosa, Antônio de Almeida, 121, 140

Machado, Dulphe Pinheiro, 36, 136, 140, 210
Mackinder, Halford, 31
Macunaíma (de Andrade), 44
Madeira (river), 13, 91, 99, 151
Madeira-Mamoré Railroad, 23, 181, 189, 195
Maes, Ernest E., 104
Maia, Álvaro, 28, *28*, 110, 120, 122
malaria, 12, 32–33, 156, 177, 187–91, 198, 200, 208. *See also* disease; labor; public health; tappers (of rubber)
Malaya. *See* Asia (rubber production in)
Malthusian discourses, 18, 29–31, 216

Man and the Biosphere Programme (UNESCO), 216
Manaus, 12–23, 35, 41–46, 93–97, 117–25, 166–79, 193–203
March to the West, 19–23, 87, 105–11, 117–23, 206–11. *See also* Battle for Rubber (mobilization campaign); Brazil; migration
marriage, 153–55, 163–64, 289n54
Martins, Raimundo, 96
masculinity, 94, 105–11, 114, 142, 186–87. *See also* gender; labor; tappers (of rubber)
Mato Grosso (state), 3, 30–31, 172
McAshan, Maurice, 77, 176
mediation and mediators: economic factors and, 10, 35–36, 43–45, 187–204; nationalism and, 10, 39–43, 46–47; natural environment and, 5–6, 10, 32–47, 86–87, 164, 217–22, 226–27; physicians and medical discourses as, 32–35, 146–48, 164–68, 187–91; social elites and, 2, 9–16, 26–31, 48, 103–13, 126, 140, 148, 154, 186–87; theorizations of, 1–3, 6. *See also* colonialism; propaganda; public health; scientific and technological rationality
Mello, Sebastião José de Carvalho e (Marquis of Pombal), 16
Mendes, Chico, 113, 224, *225*
migration: Brazilian state policies regarding, 17, 23, 88–89, 103–11, 117–23, 127, 141–46, 150, 162–68, 206–11; drought and, 17, 128–41, 168–69; familial and social ties and, 148–53, 155–64, 176, 180–81, 194–206, 289n54; gender issues and, 105–11, 117, 153–55, 161–64, 186–87, 199–206, *209*, 289n54; infrastructure and public works and, 194–206; nationalism and citizenship and, 109–17, 204–6; photos of, *162*, *165*, *167*, *183*, *196*, *198*, *209*; propaganda and, 117–23, 125, 168–69; public health discourses and, 146–48, 156, 164–68, 187–91, 194, 198, 207–8; RDC policies and, 74, 88, 174–76; worker incentives and, 143–48, 155–63, 168–69. *See also* Amazon, the; CAETA (Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia); Departamento Nacional de Imigração (DNI); labor; rubber; Rubber Development Corporation (RDC); SEMTA (Serviço Especial de Mobilização dos Trabalhadores para Amazônia)
Ministry of Health and Education, 32
Ministry of Labor, 112, 201–3
miscegenation, 31, 44, 93, 103–5, 224, 262n101. *See also* race
Missão de Pesquisas Folclóricas, 45
Monbeig, Pierre, 40
Monteiro, Otávio Carlos, 156, 193
Monteiro, Pedro Aurélio Goes, 30
Moog, Clodomir Vianna, 43
Moraes, Raymundo, 27
Morales, Lúcia Arrais, 148
motor vehicles, 23–24. *See also* automobiles
Moya, José, 129
Munduruku (people), 103. *See also* indigenous peoples
Muru (river), 153
Museu Nacional (of Brazil), 37

Nabuco, Joaquim, 116
Nash, Roy, 1, 19
National Council of Rubber Tappers, 223
National Environmental Policy Act (of Brazil), 225
National Geographic, 119
National Indian Institute (United States), 104
National Plan of Agrarian Reform, 222–23
National Rubber Month, 124
National Security Council (of Brazil), 30
national security discourses, 2, 4, 11–14, 25, 29–31, 103–5, 214–19
nations and nationalism: Amazon's importance to Brazil and, 2, 4, 9–14, 19–36, 43–45, 168–70, 206–12, 227–28; Brazil's military government and, 214–19; capitalism and, 179–87; citizenship discourses and, 111–17, 125–26, 200–204; gender inflections and, 108–11; geopolitical motivations and, 2, 4, 11–14, 25, 29–31, 103–5,

nations and nationalism (*continued*) 214–19; labor migration and, 109–17; propaganda and, 44–45, 117–23; race and, 102, 148; scientific rationality and, 32–43; U.S. rubber demand and, 19–23, 49–53, 63, 70–80, 82–84. *See also* citizenship discourses; gender; labor; race; World War II
natural disasters, 129–30. *See also* drought
Natural Resources Defense Council, 217
Nature Conservancy, 217
Netherlands, 29, 61, 65
Neves, Frederico de Castro, 140
New Deal, 66–67, 75–81, 126
No Front da Borracha (publication), 119
northeastern Brazil (region), 107–11, 119, 124–46, 148–61, 180, 182

Ochoa, Samuel, 32
Odum, Howard, 220
"O emigrante" (Galeno), 159–61
Office of Foreign Agricultural Relations (USDA), 65–66
Office of the Coordinator of Inter-American Affairs (OIAA), 70–74, 105, 108, 115–23, 136, 173. *See also* Rockefeller, Nelson; Serviço Especial de Saúde Pública (SESP)
Orellana, Francisco de, 14, 49

Panama Canal, 143, 172
Pan American Airways, 25
patron-client relations, 94–98, 140
Pearl Harbor, 26, 50–52, 56–57
peonage (debt), 78, 88, 94, 112–17
Perkins, Milo, 75
Peru, 14, 36, 77, 143
Phillips, Henry Albert, 102, 177
Pike, Frederick, 70
Pilot Program to Conserve the Brazilian Rainforest, 218
Pimentel, Francisco Menezes, 132, 139
Pinheiro, Aurelio, 26–27
Plano de Defesa da Borracha, 23
Platt, Robert, 93, 152
political ecology (definition), 3
Polonoroeste (project), 224–25
Porangabassu (camp), 162–63
Porto, Hanibal, 27
Porto Velho, 23, 180, 189–95, *196*, 197–98
Prestes, Luis Carlos, 113
price regulation (of rubber and other commodities), 58–61, 70–71, 78, 86, 112, 117, 124, 173–79, 185–87, 206
primitivism, 10, 44–48, 68–70. *See also* anthropology
Projeto Radam, 220
propaganda, 44–45, 108, *109*, 110, 117–23, *120*, 125, 127–28, 139–40, 168–69
public health, 22, 32–35, 75, 105, 146–48, 168, 177, 187–99, 207. *See also* malaria; Office of the Coordinator of Inter-American Affairs (OIAA); rubber; Serviço Especial de Saúde Pública (SESP); tappers (of rubber)
Purus (river), 13, 18, 36, 98, 143, 151, 168, 178

quinine, 32–33, 190–91

Rabinovitch, Georges, 192
race: Amazon region and, 12–16, 26–31, 103–5, 132–33; biotype studies and, 146–48; class's intersections with, 15–17, 31, 33–34, 95, 123, 147–48; environmental determinism and, 14, 26–29, 32–35, 41–45, 56, 68–70, 80–82, 84, 87, 91, 102–5, 173, 176–79; indigenous peoples and, 12–16, 47, 95, 103–5, 132–33, 141, 148, 206–11, 223; migration policies and, 111–23; nationalism and, 111–17; scientific rationalism and, 14, 146–48, 150, 262n101; traditional peoples' discourses and, 222–28. *See also* gender; indigenous peoples; labor; miscegenation
"rainforest cities," 194–206. *See also* Belém; Manaus; Porto Velho
RDC (Rubber Development Corporation). *See* Rubber Development Corporation (RDC)
reclaimed rubber, 82–84
Reconstruction Finance Corporation (RFC), 61, 75, 77, 80, 174

Rede Viação Cearense, 143–46
regions: administrative division of Brazil and, 18–27; elite discourses and cultural constructions of, 18, 29–35, 117–23, 140, 148, 154; theorizations of, 1–3, 5–7.10, 12, 18. *See also* Amazon, the; northeastern Brazil (region)
Reis, Arthur Cezar Ferreira, 5, 116
Reis, Otávio, 97, 154
religion, 97, 105–11, 117, 121–22, 126, 140, 163–64, 204, 208
Revista Brasileira de Geografia (journal), 41–42
Revista de Imigração e Colonização, 105
Ribeiro, Paulo Assis, 36, 121, 261n98
Rio Branco, 30, 100
Rio Grande do Norte (state), 119–20, 140–41, 144, 153
Rio Negro, 19, 100, 152, 181, 192
Rockefeller, Nelson, 71, 79. *See also* Office of the Coordinator of Inter-American Affairs (OIAA)
Rondon, Cândido Mariano da Silva, 35
Rondônia (state), 2, 31, 100, 224. *See also* Guaporé (territory)
Roosevelt, Franklin D., 50, 67, 70, 75–76, 82–83, 125, 174, 177
Roquette-Pinto, Edgar, 147
Royal Geographic Society, 68–69
rubber: Asian production and, 7, 23, 49–50, 56–59, 66–67, 75, 83, 91, 126, 174; boom and bust cycles and, 11–12, 17–19, 93, 95, 142–43, 148–49, 206, 211–12; price regulation and, 58–61, 70–71, 78, 86, 112, 117, 124, 173, 177–79, 185–87, 206; production and processing of, 16–17, 20–21, 52–56, 62–63, 89–94, *90*, 91, 94, 100–101, 115, 185–87; propaganda and, 44–45, 87–88, 108, *109*, 117–23, 125, 139–40; scientific rationalization and, 21, 25, 37–39, 60–63, 65–66, 70, 77, 86–87, 101–2, 115, 125–26, 164, 183, 206, 211–14; South American leaf blight and, 18, 25, 64–66; subsidies for, 18, 24, 26–29, 105–11, 132–38, 143–46, 171–87, 206–11; synthetic, 50–51, 62–63, 173, 183; tapper-boss relations and, 87, 89–105, 111–13, 123–24, 126, 156, 170, 176–87, 191–206, 226–27, 264n143; U.S. dependency on, 49–68, 70–75, 82–83, 106, 141, 171–79; wage labor and, 81, 113–15, 123–25, 176–79, 183, 196–97, 199. *See also* Amazon, the; Battle for Rubber (mobilization campaign); *Hevea brasiliensis*; labor; March to the West; masculinity; migration; reclaimed rubber; stockpiling (of rubber); tappers (of rubber); Washington Accords; World War II
Rubber Development Corporation (RDC): corporate and political connections of, 77, 80–82; divestments of, 174–76, 209; founding of, 51, 61–62, 71, 75; labor migration and, 74, 111, 114–15, 142, 146, 171, 180–87, 195, 208–11; propaganda efforts of, 117–24; scientific tapping practices and, 115–16; subsidies for tappers and, 171–72, 192; technicians of, 104, 116, 123, 191–92, 212. *See* Rubber Development Corporation (RDC)
Rubber Survey Committee, 50–51, 70, 174

Sales, Apolônio, 37
Sampaio, A. J. de, 37
Santos, Silvino, 45
Sasarate, Paulo, 127
SAVA (Superintendência de Abastecimento do Vale Amazônico), 74, 178, 185, 194–95, 197, 199, 203
Schmink, Marianne, 5
scientific and technological rationality: agriculture and, 21, 25, 37–39, 60–66, 77, 86–87, 115–16, 133, 173–74, 183, 206; the Amazon's nature and, 5–6, 10, 32–47, 86–87, 164, 217–22, 226–27; class issues and, 32–35, 43–45; colonialism and, 5, 14, 21–23, 39–46, 69–70; labor patterns and, 101–5, 115–17, 125–26, 142–43, 164, 171–79, 206; racial discourses and, 14, 146–50, 262n101; rubber extraction and, 21, 25, 37–39, 60–66, 70, 77, 86–87, 101–2, 125–26, 164, 183, 206, 211–14
Scott, James C., 88

Second World War. *See* World War II
SEMTA (Serviço Especial de Mobilização dos Trabalhadores para Amazônia), 74, 104–11, 121–22, 146–48, 162–68, 191, 208–9, 261n98
seringalistas (rubber bosses): debt and price gouging and, 180–87, 201; labor relations and, 87–105, 111–13, 123–26, 156, 170, 176–87, 191–206, 226–27
seringueiros. *See* tappers (of rubber)
Serviço de Economia Rural, 113
Serviço de Estudos de Grandes Endemias (SEGE), 22, 33
Serviço Especial de Saúde Pública (SESP), 72, 143, 187–91, *189*, 194, 196, 207–8. *See also* epidemiology; malaria; Office of the Coordinator of Inter-American Affairs (OIAA); public health
Serviço Geológico e Mineralógico do Brasil, 36
Setzer, Alberto, 219
sharecroppers, 133–34, 154, 161
Sikkink, Kathryn, 216
Silent Spring (Carson), 216
slavery, 4, 15–16, 94–95, 103, 150, 156. *See also* credit; debt; indigenous peoples
smallholders, 2, 128, 132–38, 187
Smith, Neil, 174
Sobrinho, Thomaz Pompeu, 107
Sociedade de Amigos de Alberto Torres, 31
Sociedade de Etnografia e Folclore, 45
Sociedade de Geografia do Rio de Janeiro, 40
soldados da borracha: Brazilian Constituent Assembly and, 127–28; language of citizenship and, 111–17; wartime propaganda and, 110, 117–24, 139–40, 168–69
Solimões (river), 93
South American leaf blight (*Dothidella ulei*), 18, 25, 64–66
space. *See* Amazon, the; class; geographers; race
Speech of the Amazon River (Vargas), 19–23, 45–46, 125
SPVEA (Superintendência do Plano de Valorização Econômica da Amazônia), 210
Standard Oil Company, 62
Stevenson Act (Britain), 58, 63, 152
stockpiling (of rubber), 59–63, 82–83
subsistence agriculture, 11, 64, 86, 123–24, 151, 177–78, 187–206. *See also* drought; tappers (of rubber)
SUDAM (Superintendência de Desenvolvimento da Amazônia), 210
Superintendência de Defesa da Borracha, 32
synthetic rubber, 50–51, 62–63, 70, 173, 183

Takacs, David, 220
Tapajós (river), 18, 63, 151, 195, 210
tappers (of rubber): abusive treatment of, 95–96, 99–101, 111–13, 115, 128, 156, 164–68, 184–87, 191–206, 264n143; citizenship discourses and, 111–17, 125–26, 200–204; debt peonage and, 91, 93–102, 112, 176–87; extraction techniques of, 89–90, 115–17, 125–26; kin- and kin-like relations and, 94–98, 140; land and resource uses of, 64, 86, 100–101, 123–24, 151, 177–206, 223; masculinity and, 106–11, 114, 142, 148–55, 162, 186–87, 193; migrations of, 72, 75, 102–17, 127–38, 141–46, 162–68, 204–11; political legitimacy of, 222–28; public health programs and, 146–48, 164–71, 177–79, 187–94, 198, 207–8; state pensions and, 204–6; as "traditional peoples," 222–28; U.S. political infighting and, 75–82; wage labor practices and, 81, 113–14, 123–25, 194–206. *See also* labor; migration; rubber; *soldados da borracha*
Tarauacá (river), 153
Tastevin, Constant, 93, 95–96, 153
Távora, Euclides Fernandes, 113
Távoras (family), 134, 150–51, 154
Tennessee Valley Authority (TVA), 78
Theóphilo, Rodolpho, 149
tires. *See* automobiles; rubber
Tocantins, Leandro, 5
trabalhismo, 114. *See also* citizenship discourses; Vargas, Getúlio
traditional peoples, 222–28

transportation issues: Amazon River and, 12–13, 21–23, 35–36, 48–56, 70–75; northeastern migration and, 132–38, 141–46, 150, *162*, 164–68, *165*; U.S. rubber shortage and, 171–73, 210–11
Travassos, Mario, 31
Treaty of Madrid, 15
Treaty of Petrópolis, 30
Treaty of San Ildefonso, 15
Treaty of Tordesillas, 14
tropics, 2, 34, 41, 49–70, 78–84, 102–5, 173–76, 186–88, 207. *See also* Amazon, the; colonialism; disease; geopolitics; race; rubber; World War II
Truslow, Francis A., 178

U.N. Conference on Environment and Development, 8, 218
U.N. Conference on the Human Environment, 216
U.N. Convention on Biological Diversity, 220
U.N. Environment Programme, 216, 225
UNESCO, 216
Union of Indigenous Peoples, 223
United States: Amazonian labor challenges and, 101–3, 106–11, 115–25, 135–36, 168–69, 171–87, 195; Asian rubber supplies and, 7, 49–50, 57–59, 66, 75, 83, 174; Brazilian economic partnerships and, 24–25, 70–75, *73*, 75–82, 88, 206–11, 227–28; colonialist attitudes of, 14, 56, 68–70, 76, 78, 102, 117–18, 173, 176–79, 185–87, 194–98; environmental movement in, 216–18; Good Neighbor Policy and, 25, 88, 139, 177; political infighting and, 75–82, 88, 170, 174, 178–79; rubber dependency of, 48–68, 82–84, 141, 170–79, 211–12; World War II rubber supplies and, 49–52, 58–63
U.S. Army Corps of Engineers, 171
U.S. Atomic Energy Commission, 220
U.S. Department of Agriculture, 65
U.S. Department of Commerce, 53
U.S. Institute of Inter-American Affairs, 207
U.S. Rubber (firm), 59–61, 77

vaccinations, 146–48, 168. *See also* public health
Vargas, Getúlio: authoritarian regime of, 9–10, 23; international relations and, 70–72; labor migrations under government of, 102–5, 109–17, 132–33, 206–11; nationalistic impulses of, 7, 10, 19–23, 26–43, 210–11; public health policies and, 32–35, 72–73; social justice agenda of, 12, 87, 100, 112–17, 137, 156, 168–69, 184–87, 192–93, 201; *Speech of the Amazon River* and, 19–23, 45–46, 125. *See also* Battle for Rubber (mobilization campaign); March to the West; *trabalhismo*; Washington Accords
Vasconcellos, Francisco de Assis, 98
Verdoorn, Frans, 38
Veríssimo, José, 40
Villa, Marco Antonio, 128
vulcanization, 17

Wagley, Charles, 136, 142
Wallace, Henry A., 66, 75–76, 78–82, 84, 174. *See also* Board of Economic Warfare (BEW)
Walt Disney Studios, 118, 122
War Production Board, 57, 174
war profiteering, 179–87
Washington Accords, 71–75, 117, 200
Weinstein, Barbara, 89, 151, 155
Wickham, Henry, 18
Wilson, Charles, 78
Wilson, Woodrow, 79
Wolf, Eric, 7
Wood, Charles, 5
World's Columbian Exposition (1893), 56
World's Fair (1939), 56
World War I, 19, 38, 57, 70
World War II: Amazonian development investment and, 5, 19–23, 49–52, 70–75, 168–69; Brazil's foreign trade and, 24–25; propaganda and, 44–45, 108, *109*, 117–23, 127–28; rubber demand and, 49–53, 63, 70–80, 82–84, 171–72, 205–6, 211–12. *See also* Germany; Japan; rubber; United States
World Wildlife Fund-U.S., 217